ECAT Pre Engineering Entry Test

Sr	Questions	Answers Choice
1	A square matrix A = [aij] is upper triangular when	A. cij = 0 B. bij = 0 C. aij = 0 for all i > j D. dij = 0
2	The set of second elements of the ordered pairs forming a relation is called a	A. Domain B. range C. function D. relation
3	If a statement S(n) is true for n = i where i is some natural number and the truth of S(n) for n = k > i implies the truth of S(n) for n = k +1 then S(n) is true for all positive integers	
4	Question Image	
5	The maximum value of the quadratic function f(x) = 2x2-4x+7,is	A. 3 B. 5 C. -3 D. -5
6	Period of cosec x is _____	
7	Which of the following are valid roots of $3x^3 - 8x^2 - 5x + 6$	A. -1 B. 3 C. 1 D. Both A and B
8	Rank of matrix [1 3 5 0] is	A. 1 B. 3 C. 2 D. 4
9	Question Image	A. 6 B. 360 C. 120 D. 24
10	The length of the tangent from (2, 1) to the circle $x^2 + y^2 + 4y + 3 = 0$ is	
11	Question Image	A. 0 B. -1 C. 1 D. 1/2
12	The in-centre of triangle whose vertices are (0,0), (5,12) and (16,12) is:	A. (9,7) B. (2,7) C. (9,2) D. (7,9)
13	The area under the curve $y = 1/x^2$ between x = 1 and x =4 is:	A. -25 B. 0.75 C. -0.35 D. -10
14	$n! > 2^n - 1$ is true when	A. n≤ 3 B. n≤ 6 C. n≥ 4 D. n≤ 6
15	Which of the following statement is true?	A. A set is a collection of non-empty object B. A set is a collection of only numbers C. a set is any collection of things D. a set is well-defined collection of objects
16	The system of measurement in which the angle is measured in degrees, minutes and seconds is called the	A. circular system B. CGS system C. sexagesimal system D. none of these
17	If all members of a sequence are real numbers then it is called a	A. Series B. Function C. Real sequence

	then it is called a	C. Real sequence D. Range
18	If (0, 0) and (0, -1) are end points of a diameter, then the equation of the circle is	
19	Question Image	D. none of these
20	If b_1, b_2, b_3, ... are in G.P. with first term unity and common ratio r, then the minimum value of $b_1 - b_3 + b_5$ is equal to	A. 3/4 B. 1/4 C. 1 D. None of these
21	Question Image	A. 1 / 2 B. 1 / 3 C. 1 / 4 D. None of these
22	Which one is not defined $\forall n \in Z+$	A. -n! B. n! C. (-n)! D. n!+0!=n!+1
23	Two balanced dice are tossed once, the sample space when the integers on the faces of two dice are the same is	A. {(1, 1), (2, 2), (3, 3)} B. {(4, 4), (5, 5), (6, 6)} C. {(1, 1), (2, 2), (3, 3), (4, 4), (5, 5), (6, 6)} D. None of these
24	If the roots of $ax^2 - bx - c = 0$ change by the same quantity, then the expression in a, b, c that does not change is	
25	If five triangles are constructed having sides of the lengths indicated below, the triangle that will NOT be a right triangle is	A. 8, 15, 17 B. 3, 4, 5 C. 12, 15, 18 D. 5, 12, 13
26	(7,9) +(3,-5) =	A. (4,4) B. (10,4) C. (9,-5) D. (7,3)
27	What is the conjugate of -7 -2i?	A. -7 + 2i B. 7 + 2i C. 7 -2i D. None of these
28	Question Image	
29	The cube roots of 8 are	
30	Question Image	
31	The range of the principal sine function is	
32	Question Image	
33	Question Image	A. The law of sines B. The law of consines C. The law of tangents D. None of these
34	Sum of n terms of a geometric series if $\| r \| < 1$ is	
35	Question Image	A. 0 B. 1 D. undefined
36	$\cot\theta = \sin 2\theta$ if $\theta =$	
37	The sum of first twenty odd integers in A.P is	A. 400 B. 397 C. 404 D. 408
38	Question Image	A. 1 B. 12 C. 5 D. 29
39	An ellipse slides between two lines at right angles to one another. The locus of its centre is :	A. a parabola B. an ellipse C. a circle D. a hyperbola
	Three numbers are chosen random without replacement from {1, 2, 3, ..., 10}, the	A. 7 / 40 B. 5 / 40

40	replacement from {1, 2, 3, ..., 10}. the probability that minimum of the chosen numbering is 3 or their maximum is 7	B. 5 / 40 C. 11 / 40 D. None of these
41	The tangents drawn from the point P to a circle are imaginary if	A. P is on the circle B. P is inside the circle C. P is outside the circle D. none of these
42	The distance of the point (2,3) from origin is	B. 5 C. 2 D. 3
43	$\forall x, y \in R$, either $x = y$ or $x > y$ or $x < y$ is	A. Transitive property B. Reflexive property C. Trichotomy property D. None of these
44	$\cos h^2 x + \sin h^2 x$	A. an even function B. an odd function C. an even and implicit function D. neither even nor a odd
45	The solution set of the equation $\tan^{-1}x - \cot^{-1}x = \cos^{-1}(2 - x)$ is	A. [0, 1] B. [-1, 1] C. [1, 3] D. None of these
46	The difference of two consecutive terms of an A.P. is called _____	A. General term B. Common ratio C. Common difference D. None of these
47	A circle drawn inside a triangle and touching its sides is called _____;	A. Circumcirle B. Incircle C. Escribed circle D. unit circle
48	The eccentricity of parabola is:	A. 1 B. 0 C. Greater than 1 D. Less than 1
49	Question Image	A. 1 B. 2 C. 3 D. 4
50	an -an-1, $\forall n \in N \wedge n>1$ in an A.P is called	A. Common difference B. nth term C. Common ratio D. None of these
51	Question Image	A. Null matrix B. Triangular matrix C. Unit matrix D. Rectangular matrix
52	Question Image	
53	Question Image	D. none of these
54	If in a set of real no a is multiplicative identity then	A. a,a = a² B. a,a = 1 C. a,a = 0 D. None of these
55	The key for opening a door is in a bunch of 10 keys. A man attempts to open the door by trying the keys at random discarding the wrong key. The probability that the door is opened in the 5th trial is	A. 1 / 10 B. 2 / 10 C. 3 / 10 D. 4 / 10
56	Both the roots of the equation (x -b) (x - c) + (x -c) (x-a) +(x-a) (x-b) = 0 are always	A. Positive B. Negative C. Real D. None of these
57	Question Image	A. Hermitian matrix B. Skew-hermitian matrix C. Symmetric matrix D. Identity matrix
58	Arithmetic mean between x - 3 and x + 5 is	A. x + 1 B. x + 2 C. x + 3 D. x + 4
		A. y-axis

59	The graph of y> 0 is the upper - half of:	B. x-axis C. 1st and 4th quandrant D. 2nd and 3rd quadrant
60	The points A(3,1),B(-2,-3),C(2,2) are vertices of an (an)	A. Right triangle B. Equilateral triangle C. Isosceles triangle D. Scalene triangle
61	Question Image	
62	In R, the multiplicative identity is	A. 0 B. 1 C. -1 D. None
63	$a.a^{-1} = a^{-1}.a = 1$ is a	A. Commutative law of multiplication B. Multiplicative identity C. Associative law of multiplication D. Multiplicative inverse
64	If A = [aij]mxpand B =[aij]pxnthen order of BA is	A. m x n B. p x n C. n x m D. None of these
65	If A is a skew-symmetric matrix of order n and P, any square matrix of order n, prove that P' AP is	A. Skew-symmetric B. Symmetric C. Null D. Diagonal
66	Question Image	
67	The probability that the sum of dots appearing in two successive thrown of two dice, in every time 7 is	A. 1/5 B. 1/36 C. 1/7 D. 1/63
68	The line joining the center of a circle to the midpoint of the chord is	A. Perpendicular to the tnagent B. Perpendicular to the normal C. Perpendicular to the chord D. Perpendicular to the chord
69	If x < y, 2x = A, and 2y = B, then	A. A = B B. A < B C. A < x D. B < y
70	The derivative of$\sqrt{x}$ at x =a is:	A. 1/2a B. 2 / $\sqrt{a}$ C. 2$\sqrt{x}$ D. 1 / 2$\sqrt{x}$
71	Question Image	
72	w^{-1}= _____	A. 0 B. 1 C. w D. w²
73	$i^{(4n+2)}$ = ----------	A. 1 B. i C. -1 D. -i
74	A fraction in which the degree of the numerator is less than the degree of the denominator is called	A. Polynomial B. Equation C. Proper fraction D. Improper fraction
75	The distance between the points A(3,1) and B(-2,-4) is	A. 5 C. 25 D. 10
76	Question Image	
77	Question Image	
78	Question Image	A. 1 B. -1 C. 5 D. 2
79	An expression involving any of the symbols <,>,≤ or ≥ is called	A. equation B. inequality C. linear equation D. identity

80	If distance between (3,b) and (0,0) is 3 then b = _____	A. 3 C. 9 D. 0
81	Which of the following is a quadrantal angle	A. 100° B. 200° C. 170° D. 270°
82	Question Image	
83	The set of complex numbers forms	A. Commutative group w.r.t addition B. Commutative group w.r.t multiplication C. Commutative group w.r.t division D. Non commutative group w.r.t addition
84	Question Image	
85	xy= 2 is:	A. a constant function B. an identity function C. an improper function D. implicit function
86	sin$\alpha =$	A. 2 sinαcosα B. 2 sinαcosβ C. 2 sinα/2 cosα/2 D. 1+ tan²α/2
87	A disjunction of two statement p and q is true	A. p is false B. q is false C. Both p and q are false D. One of p and q is true
88	If$f(x) = c$ thenf^{1} (x0 equals:	A. 1 B. 0 C. cx D. c
89	Question Image	
90	Question Image	
91	An airplane flying at height of 300 meters above the ground passes vertically above another plane at an instant when the angle of elevation of the two planes from the same point on the ground are 60° and 45° respectively. Then the height of the lower plane from the ground is (in meters).	
92	tan (-135°) = _____θ	A. 0 B. 1 C. 2 D. 3
93	The function whose range consists of just one element is called	A. One-One Function B. Identity Function C. Onto Function D. Constant Function
94	Question Image	
95	In a country, 55% of the male population has houses in cities while 30% have houses both in cities and in village. Find the percentage of the population that has house only in villages.	A. 45 B. 30 C. 25 D. 50
96	Cos (α+β) - cos (α-β) =	A. -2 sinα sinβ B. 2 sinαcosβ C. -2 sinαcosα D. 4 sin<span style="font-family: "Times New Roman"; font-size: 24px;

		D. 4 sinα cosβ
97	The upper 3/4 the portion of a vertical pole subtends an angle $\tan^{-1}3/5$ at a point in the horizontal plane through its foot and at a distance 40 m from the foot. A possible height of the vertical pole is	A. 20 m B. 40 m C. 60 m D. 80 m
98	Question Image	A. π/ 2 B. π/ 3 C. π/ 4 D. π
99	Question Image	
100	Question Image	A. 0 B. -1 C. 1 D. not defined
101	Question Image	A. a sec(ax + b) + c B. - a sec(ax + b) + c
102	If $2\tan^{1}(\cos x) = \tan^{-1}(\text{cosec}^{2}x)$, then x is equal to	A. π/ 3 B. π/ 2 C. π/ 6 D. π
103	In R, the additive identity is	A. 0 B. 1 C. -1 D. None
104	The multiplicative inverse of -1 in the set {1-, 1} is	A. 1 B. -1 C. 0 D. Does not exist
105	The coordinates of a point which trisects segment joining (0,0) and (9,12) are:	A. (4,3)(8,6) B. (4,3)(6,8) C. (3,4)(6,8) D. (3,4)(8,6)
106	(x +a)(x +b)(x +c)(x +) = k, k≠0 is reducible to quadratic form only if	A. a+b=c+d B. a+c=b+d C. a+d=b+c D. All are correct
107	Question Image	A. [0,1[B. [0, 1] C.]0, 1[D. None of these
108	Question Image	
109	The symbol _____ shall be used both for equation and identity	A.
110	The equation of the parabola with directirx x = 2 and the axis y = 0 is	A. y²= 8x B. y²= -8x C. y²= 4x D. y²= -4x
111	Question Image	D. all
112	Question Image	A. zero at x B. differentiable at x C. continuous at x D. none of these
		A. (1,4)

113	Solving the equation $2^{2x}-3 \times 2^{x+2} + 2^5 = 0$ for $2^{2x}-3 \times 2^{x+2} +2^5 = 0$	B. (8,4) C. (2,3) D. (5,9)
114	The set of natural no. is closed under	A. multiplication B. subtraction C. difference D. division
115	If $a_1= a_2= 2$, $a_n= a_{n-1}- 1$ (n > 2), then $a_5$is	A. 1 B. 0 C. -1 D. -2
116	Question Image	B. tan 3x + c C. cot 3x + c D. - cot 3x + c
117	According to Aristotle, in proposition there could be	A. one possibilities B. two possibilities C. three possibilities D. seven possibilities
118	Question Image	A. Polynomial B. Equation C. Improper rational fraction D. Proper rational fraction
119	Question Image	A. 5x^{4 + c} B. 1/6 x⁶+ c C. 5x²+ c D. 1/5 x⁶+ c
120	If |a x b|2 + (a,b)2 = _____	A. |a|2 + |b|2 B. |a|2- |b|2 C. |a|2|b|2 D. None
121	Question Image	A. One-one but not onto B. One-one and onto C. Onto but not one-one D. Neither one-one nor onto
122	Question Image	C. 0 D. 1
123	The set {x|x∈N∧x-4=0} in tabular form is	A. {-4} B. {0} C. {} D. None of these
124	If a polynomial P(x) is divided by x + a, then the remiander is	A. P(a) B. P(-a) C. P(0) D. None of these
125	Question Image	A. 1/8 B. 1/2 C. 1/4 D. 1/6
126	In-radius is denoted by	A. r B. η C. r2 D. R
127	Question Image	
128	Question Image	
129	If a > b or a < b than a = b is a	A. Additive property B. Transitive property C. Trichotomy property of inequality
130	-2, 1, 4, 7,.... is _____	A. Harmonic sequence B. Arithmetic sequence C. Geometric sequence D. Arithmetic series
131	Period of 3 sin x is _____	
132	Question Image	A. 0 B. 1 D. -1
133	The distance between the points A(-8,3) and B(2,-1) is	B. 116 D. none of these

134	The greater part of our knowledge, is based on	A. deduction B. induction C. conjunction D. disjunction
135	A _____ divides the plane into left and right half planes.	A. Vertical line B. Horizontal line C. Non vertical line D. Inequality
136	an - an-1 will be common difference in an A.P if	A. n = 1∀n∈ N B. n>1∧n∈N C. n∈Z D. None of the above
137	Matrices are represented by	A. Natural numbers B. Real numbers C. Small letters D. Capital letters
138	Question Image	A. 15 B. 9 C. 7 D. 8
139	The study conics, pappus used the method of:	A. analytic geometry Euclidean B. solid geometry C. Greek mathmaticians D. None of these
140	Question Image	
141	$(51)^4$is equal to	A. 7065201 B. 8065201 C. 6765201 D. 6565201
142	Name the property used in 100 + 0 = 100	A. Additive inverse B. Multiplicative inverse C. Additive identity D. Multiplicative identity
143	The graph of the linear equation of the form ax =by = c is a line which divided the plane into:	A. Two similar regions B. Two disjoint regions C. Four equal parts D. One region
144	If f (x)=a0 +a1x+a2x2+a3x3-----+0n-1xn-1+anxn then f(n) (x) is equal to	A. n! B. ann! C. 0 D. an
145	The additive inverse of 2/3 is	A. 3/2 B. -2/3 C. -3/2 D. 0
146	Sin 45° = _____	
147	Question Image	A. parallel vectors B. perpendicular vectors C. concurrent vectors D. collinear vectors
148	Equation of normal to the circle x2 + y2 =25 at (5cosθ,5sinθ)	A. xcosθ+ysinθ =5 B. xcosθ -ysinθ =0 C. xsinθ -ycosθ =0 D. None of these
149	The points (3,1), (-2,-3) and (2,2) are the vertices of :	A. Equilateral triangle B. Isosceles triangle C. right -angled triangle D. rhombus
150	sin(a-90°)=_____;	A. sina B. cosa C. -sinθ D. -cosa
151	The distance between lines 3x + 4y = 9 and 6x +8y = 15 is:	A. 2/3 B. 3/10 C. 8 D. 6/5
152	√x = _____ if is a prime number	A. Rational no B. Natural no C. Irrational no D. Complex no

153	Five engineering, four mathematics, two chemistry books are placed on a table at random.The probability that the books of each kind are all together is	
154	The domain of f(x) = log x is	A. [0,∞] B. (0,∞) C. [0,∞[D. [∞,∞]
155	Question Image	
156	Question Image	A. 1 B. 7 C. 4 D. None of these
157	Question Image	
158	If you are looking a bird in the tree from the ground then the angle formed is called angle of_____;	A. Elevation B. Depression C. Right angle D. None of these
159	The lotus of intersection of perpendicular tangents to the parabola $y^2 = 4ax$ is:	A. Axis of the parabola B. Focal chord of the parabos C. The tangent at vertex of the parabola D. a directrix of the parabola
160	Question Image	
161	The feasible region which can be enclosed within a circle is called	A. Bounded region B. Convex region C. Unbounded region D. None
162	The sum of infinite numbers of terms of an arithmetic series is	A. Finite B. Infinite C. May or may not finite D. None of these
163	How many arrangements of the letter of the word PAKPATTAN can be made	
164	For $f(x) = x^2 + px + 1$, if f(3) = 3 then P =	A. 3/7 B. -2/5 C. -7/5 D. -7/3
165	Question Image	
166	The 10th common term between the series 3+7+11+..... and 1 + 6 +11 + ... is	A. 191 B. 193 C. 211 D. None of these
167	Question Image	A. 0 B. -1 C. 1 D. 2
168	How many arrangements of the letters of the word ADDING can be made	
169	The fixed point which lies on the axis of the cone is called its	A. axis B. apex C. nappes D. axis
170	(-28,12) divides the join of A(-6,3) and B(5,-2) in ratio	A. 1:2 B. 3:2 C. 2:3 D. 2:1
171	Roots of the equation $9x^2 - 12x + 4 = 0$ are	A. Real and equal B. Real and distinct C. Complex D. None of these

172	A relation in which the equality is true only for some values of the unknown is called	A. An identity B. An equation C. A polynomial D. None
173	Question Image	A. 8 B. 1/8 C. 1/3 D. 2/3
174	The equation of the circle with centre at (5, -2) and radius 4 is	
175	Question Image	A. images B. pre-images C. constants D. none of these
176	The span of a standard parabola depends upon	A. x B. a C. y D. y2
177	Question Image	D. none of these
178	Find the set of value of m for which expression $2x^2$ -mx = 2 = 0 have real roots?	A. m< -4 B. m> 4 C. -4 < m> 4 D. None
179	If ab > 0 and a < 0, which of the following is negative?	A. b B. -b C. -a D. (a - b)²
180	Question Image	A. No solution B. One real solution C. More than one real solution D. None of these
181	arb mean	A. a is related to b B. b is related to a C. a is reciprocal of b D. a is not related to b
182	PQ is a post of given height a, and AB is a tower at some distance;$\alpha$and$\beta$are the angles of elevation of B, the top of the tower, at P and Q respectively. The height of the tower and its distance from the post are	
183	Question Image	A. A B. 0 C. Unit vector D. None
184	The period of tan x/7 is	A. 3π B. 7π C. 15π D. 5π
185	Question Image	
186	The general term of a sequence is denoted by	A. a₁ B. a_n C. n D. s_n
187	The seventh term of an A.P whose first term is P and common difference is q. is	A. P-6q B. P+6q C. P-4q D. P-nq
188	Question Image	
189	A person standing on the bank of a river observes that the angle subtended by a tree of the opposite bank is 60°, when he retreats 40 m from the bank, he finds the angle to be 30°. The height of the tree and the breadth of the river are	
190	Empty set is	A. Not subset of every set B. Finite set C. Infinite set

		D. Not the member of real numbers
191	Question Image	A. 2 B. 4 C. 6 D. 8
192	Question Image	
193	Cos^{-1} 12/13 =	A. tan⁻¹ 3/5 B. cot⁻¹ 13/12 C. Sec⁻¹ 13/12 D. sin⁻¹ 5/13
194	Question Image	D. none of these
195	Question Image	
196	Co-ordinate of a point on the parabola $y^2 = 8x$ whose focal distance is 4 are:	A. (2 , 4) B. (-2 ,-4) C. (-2, 4) D. (2,-4)
197	Which of the following is a vector.	A. work B. time C. density D. electric field
198	Number of lines passing through three non-collinear points is	A. 2 B. 3 C. 1 D. 0 E. ∞
199	Question Image	
200	Question Image	
201	$tan(cot^{-1}x)$ is equal to	A. cot(tan⁻¹x) B. tan x C. secon x D. None of these
202	If (x,y) are the coordinates of a point P, then the first number of the ordered pair is called:	A. Ordinate B. Abscissa C. quadrant D. Cartesian
203	The set of natural is a semi group w.r.t	A. Addition B. Division C. Subtraction D. None of these
204	Question Image	
205	The exact value of cos-1 (0) is	A. π/2 B. -π/2 C. 3π D. π-π/6
206	Question Image	A. 2 and 9 B. 3 and 2 C. 2/3 and 9 D. 3/2 and 6
207	A circle drawn inside a triangle and touching its sides is called	A. In-circle B. Circum circle C. Escribed circle D. None of these
208	Question Image	A. 0 B. abc C. 1/abc D. None of these
209	If $y=x^m$then dy/dx equals:	A. mx B. x/m C. mx^{m-1} D. xm^{m-1}
210	Question Image	C. ln f(x) + c D. f(x) - c
211	Question Image	A. Proper fraction B. Improper fraction C. Rational fraction D. None of these

212	The third term of a G.P. is the square of first term. If the second term is 8, then the 6th term is	A. 120 B. 124 C. 128 D. 132
213	Question Image	
214	Question Image	
215	Question Image	D. None of these
216	If a and b are two vectors then a+b =	A. b + a B. b - a C. ab D. a^ b
217	Question Image	A. Rational B. Irrational C. Natural D. Odd
218	Question Image	
219	Question Image	
220	Question Image	
221	Question Image	A. R B. 2R C. r D. 2r
222	Question Image	
223	Question Image	A. 0 B. 1 C. 13
224	Domain of sec$\theta$is	
225	Which of the following is a vector.	A. distance B. temperature C. energy D. acceleration
226	Equation of parabola with focus F(-3,1) directrix x=3 is	A. (y -1)2 =-12x B. (y-1)2 =4x C. (x+3)2 =4a(y-1) D. y2 =-12(x-1)
227	cos (180° -θ)=	A. sinθ B. - cosθ C. - sinθ D. None of above
228	If x^2 + px + 1 is a factor of ax^3+ bx +c, then	A. a²+ c²= -ab B. a²- c²= -ab C. a²- c²= ab D. None of these
229	The set R is _____ w.r.t subtraction	A. Not a group B. A group C. No conclusion drawn D. Non commutative group
230	Question Image	
231	Question Image	A. quadrant I B. quadrant II C. quadrant III D. quadrant IV
232	A box contains 10 red 30 white and 20 black marbles When a marble is drawn at random the probability that it is either red or white is	A. 1/6 B. 1/3 C. 1/2 D. 2/3
233	The first three terms in the expansion of $(1 + x)^{-2}$are _____	A. 1 - 2x + 3x² B. 1 - 2x - 3x² C. 1 + 2x + 3x² D. -2 -2x + 3x²
234	If u =[3,-4],then modulus of u is:	A. 5 B. 5i C. -5 D. √5

235	Period of cot x is _____	
236	System of linear equations is inconsistent if	A. System has no solution B. System has one solution C. System has two solution D. None of above
237	If a,b,c are in arithmetic progression, then 1/a,1/b.1/c are in	A. A.M B. G.M C. H.M D. G.P
238	Question Image	
239	Question Image	A. 16 B. 256 C. 64 D. 1024
240	The number of solution of the equation tan x + sec x = 2 cos x lying in the interval [0, 2π] is	A. 0 B. 1 C. 2 D. 3
241	Any recurring decimal represents a	A. Irrational no B. Integer C. Rational no D. None of these
242	Question Image	A. 12 B. 13 C. 14 D. 15
243	Question Image	
244	If points (5 , 5), (10 , x) and (-5 , 1) are collinear, x =	A. 5 B. 3 C. 9 D. 7
245	x is a member of the set [-1, 0, 3, 5] y is a member of the set {-2, 1, 2, 4} which is possible?	A. x - y = -6 B. x - y < -6 C. x - y > -6 D. None
246	The sum of an indicated number of terms in a sequence is called	A. sequence B. progression C. Series D. Mean
247	The tangents drawn from the point P to a circle are real and coincident if	A. P is on the circle B. P is inside the circle C. P is outside the circle D. none of these
248	If $f(x) = ax^2$, and a>0, then the lowest point on the parabola is called.	A. Vertex of parabola B. Co-ordinates of parabola C. Roots of the equation D. Coefficient of the equation
249	Question Image	A. A²- 5A + 7I = 1 B. 2A²- 3A + 7I = 0 C. A²- 5A + I = 0 D. A²- 5A + 7I = 0
250	Question Image	A. y + 1 = Ae^x B. y + 1 = Axe^x C. xe^x= C D. y + xe^x= C
251	A machine operates if all of its three components function. The probability that the first component fails during the year is 0.14, the second component fails is 0.10 and the third component fails is 0.05. the probability that the machine will fail during the year is	A. 0.2647 B. 0.2692 C. 0.3647 D. None of these
252	A Geometric Series is divergent only if	A. |r|>1 B. |r|≥1 C. |r|=1 D. None of these
253	Question Image	A. 12 B. 6 C. 8

		D. none of these
254	∀ a,b, c ε R ac = bc ⇒ a = b, c ≠ 0 is a	A. Symmetric property B. Cancellation property w.r.t multiplication C. Reflexive property D. Transitive property
255	Question Image	
256	Power set of X i.e P(X).....under the binary operation of union U	A. Forms a group B. Does not form a group C. Has no identity element D. Infinite set although X is infinite
257	The conjugate of $\sqrt{5}\,i$ is	A. $\sqrt{5}$ B. $-\sqrt{5}\,i$ C. i D. 5i
258	Question Image	A. real part of z B. imaginary part of z C. conjugate of z D. modulus of z
259	Graph of the question $x^2+ y^2= 4$ is	A. A circle B. An ellipse C. A parabola D. A square
260	If E = { } , then P(E)	A. ⌀ B. { } C. {(2),(4),(6)....} D. (⌀)
261	$(2 + w) (2 + w^2)$ = _____	A. 1 B. 2 C. 3 D. 0
262	Question Image	
263	Question Image	
264	Two matrices a and B are said to be conformable for multiplication AB if the number of columns of A is equal to the numbers of	A. Columns of B B. Rows of B C. Columns of AB D. Rows of AB
265	Group of none-singular matrices under multiplication is	A. None-Abelian group B. Semi group C. Abelian group D. None of these
266	Question Image	A. Improper rational fraction B. Proper rational fraction C. Polynomial D. Equation
267	A person standing on the bank of a river observes that the angle of elevation of the top of a tree on the opposite bank of the river is 60° and when he retires 40 meters away from the tree the angle of elevation becomes 30°. The breadth of the river is	A. 40 m B. 30 m C. 20 m D. 60 m
268	Total number of subsets that can be formed out of the set {a,b,c} is	A. 1 B. 4 C. 8 D. 12
269	If $f(x) = x^2- x$ then f(2) is	A. 4 B. 6 C. 2 D. 0
270	tan(3π/2 +θ)=_____;	A. tanθ B. cotθ C. -tanθ D. -cotθ
271	Question Image	
272	An open sentences formed by using the sign of equality '=' is called _____	A. An identity B. An equation C. A polynomial D. None of these
273	The solution of the equation $\cos^2\theta+ \sin\theta+ 1$ =	

273	0 lies in the interval	
274	Question Image	
275	There is no integer n for which 3n is	A. Even B. Prime C. Odd D. Real
276	The set (Z, +) forms a group	A. Forms a group w.r.t. addition B. Non commutative group w.r.t. multiplication C. Forms a group w.r.t multiplication D. Doesn't form a group
277	Question Image	
278	For Cosine Rule of any triangle ABC, $b^2$is equal to	A. a²- c²+ 2ab cos A B. a³+ c³- 3ab cos A C. a²+ c²- 2ac cos B D. a²- c²4bc cos A
279	Question Image	D. none of these
280	the curve of the parabola $y^2 = -4ax$ is symmetric with respect to	A. x -axis B. y - axis C. Botha x and y- axis D. None of thes
281	Any whole number can be written as a product of factors which are	A. Odd numbers B. Prime number C. Rational number D. Even number
282	The constant distance of all points of the circle from its centre is called the	A. radius of the circle B. secant of the circle C. chord of the circle D. diameter of the circle
283	x = _____ is in the solution of $2x + 3 < 0$	A. 0 B. 2 C. -1 D. -2
284	The direction cosines of y-axis are	A. 1, 0, 0 B. 0, 1, 0 C. 0, 0, 1 D. 1, 1, 1
285	Question Image	A. 1 B. 0
286	Question Image	
287	Question Image	
288	Question Image	D. none of these
289	Question Image	D. none of these
290	Two cards are drawn at random without replacement. the probability that the first is a king and second is not a king is	A. 48 / 663 B. 24 / 663 C. 12 / 663 D. None of these
291	Question Image	
292	Question Image	
293	Question Image	A. A B. A' C. U D. None of these
294	If A = [aij] is (m x n) matrix then transpose of A	A. m x m B. m x n

294	is of the order	C. n x n D. n x m
295	The general term of the A.P. is	A. a₁+ (n - 1) d B. n + (a₁- 1) d C. d + (n - 1) a₁ D. None of these
296	Shifting origin to (-3,2), the new coordinate of (-2,6) are:	A. (1,4) B. (2,4) C. (-1,3) D. (-1,4)
297	Question Image	
298	Associative law of multiplication	A. ab = ba B. a(bc) = (ab) c C. a(b+c) = ab + ac D. (a + b)c = ac + bc
299	The distance of the points (3, 4, 5) from y-axis is	
300	Question Image	
301	22.5°=_____	
302	f(x) = ax + b will be a constant function if	A. a = 1 , b = 1 B. a = 1 , b = 0
303	The exterior angle of the interior angle C of he quadrilateral whose vertices are A(5,2),B(-2,3),C(-3,-4),D(4,-5) is	A. 30° B. 60° C. 45° D. 90°
304	Question Image	
305	Question Image	
306	a _____quantity is one that possesses both magnitude and direction.	A. Scalar B. Vector C. Segment D. None of these
307	If sin$\alpha$and cos$\alpha$are the roots of the equation px^2+ qx + r =0, then	A. p²- q²+ 2pr = 0 B. (p + r)²= q²- r² C. p²+ q²- 2pr = 0 D. (p - r)²= q²+ r²
308	The set of real numbers is a subset of	A. The set of natural numbers B. The set of rational numbers C. The set of integers D. The set of complex numbers
309	The triangle that does not have a right angle is called.	A. Isosceles triangle B. right angle triangle C. equivalent triangle D. oblique triangle
310	How many arrangements of the letters of the word MATHEMATICS can be made	
311	Question Image	
312	Question Image	D. none of these
313	For reasoning, we have to use	A. implication B. conjunction C. induction D. proposition
314	The points A(+1,-1),B(3,0),C(3,7),D(1,8) are vertices of	A. Square B. Parallelogram C. Rectangle D. Trapezium
315	In a triangle ABC, if angle A = 72° , angle B = 48° and c = 9 cm then Ĉ is	A. 69° B. 66° C. 60° D. 63°
316	Range of tan x is _____	A. [-1, -] B. R C. Negative real numbers D. R - {x | - 1 < x < 1}
317	Question Image	

317	Question Image	
318	The distance between the points (0 , 0) and (1, 2) is	A. 5 C. 0 D. 3
319	Question Image	
320	Question Image	A. 0 B. 1
321	Question Image	A. 1 B. -1 C. 0 D. None of these
322	Area of inscribed circle is	A. π R2 B. π η2 C. π r22 D. π r2
323	Identity w.r.t intersection in a power set of any set is	A. ⌀ B. Set itself C. Singleton set D. {0}
324	Question Image	A. 2 B. 7 C. 8 D. 12
325	Question Image	A. 9/4 B. 4/9 C. 1 D. None of these
326	If A(a,b) lies on 3x +2y =13 and point B(b,a) lies on x-y =5 then equation of AB is	A. x- y= 5 B. x+ y+ =5 C. x+ y= -5 D. 5x +5y =21
327	Question Image	
328	If $\cos^{-1}p + \cos^{-1}q + \cos^{-1}r = \pi$then $p^2+ q^2+ r^2+$ 2pqr is equal to	A. 3 B. 1 C. 2 D. -1
329	Question Image	
330	Conic sections or simply conics are the curves obtained by cutting a right circular cone by	A. a line B. two lines C. a plane D. two planes
331	Question Image	
332	Which of the following function form 1 to itself are bi-jective	A. F(x) = x + 3 B. F(x) = x⁵ C. F(x) = 3x + 2 D. F(x) = x²+ x
333	Given X,Y are any two sets such that number of elements in set X = 28, number of elements in set Y = 28, and number of elements in set X∪Y = 54, then number of elements in set X∩Y =	A. 4 B. 3 C. 2 D. 1
334	Arithmetic mean between 14 and 18 is	A. 16 B. 17 C. 15 D. 32
335	$7^{2n}+ 3^{n-1}. 2^{3n-3}$is divisible by	A. 24 B. 25 C. 9 D. 13
336	Question Image	
337	If z=(x,y) then z has no multiplicative inverse when	A. x ≠ 0, y = 0 B. x = 0, y = 0 C. x = 0, y ≠ 0 D. None of these
338	Question Image	A. 0 B. 1 C. -1 D. none of these

339	A square matrix A = [aij] is upper triangular when	A. cij = 0 B. bij = 0 C. aij = 0 for all i > j D. dij = 0
340	The length of perpendicular form(-2,3) to the line y=2x-3 is:	A. 5√2 B. 6 C. 2√5 D. 7.5
341	*i* is equal	A. (1 , 0) B. (0 , 1) C. (1 , 1) D. (0 , 0)
342	the largest degree of the terms in the polynomials is called	A. terms of the polynomial B. degree of a polynomial C. co-efficient D. monomial
343	Such a function which is (1 -1) is called	A. surjective B. injuctive C. bijective D. into
344	The law of sines is	
345	$16^{o}30'$ =	A. 16.5^o B. 16.2^o C. 16.60^o D. 19.9^o
346	Question Image	A. Associative property of addition B. Associative property of multiplication C. Commutative property of addition D. Commutative property of multiplication
347	The symbol of irrational is	A. W B. N C. Q D. Q'
348	Question Image	
349	The 7th term of the A.P 7,11,15,is	A. 24 B. 31 C. 26 D. 23
350	The value of 63^{o}in term ofπ is	A. 5π/2<img width="9" height="19" src="file:///C:/Users/Softsol/AppData/Local/Temp/msohtmlclip1/01/clip_image002.png" v:shapes="_x0000_i1025"> <!--[endif]--><o:p></o:p> B. 5π/3 C. 7π/20 D. 7π/3
351	The inclination of a line parallel to y-axis is	
352	x = _____ is in the solution of 2x - 3 < 0	A. 2 B. -2 C. 3 D. 4
353	Question Image	A. perpendicular vectors B. concurrent vectors C. parallel vectors D. none of these
354	Question Image	
355	$(1 - x)^{3}$= _____	A. 1 + 3x + 3x²+ x³ B. 1 + x + x²+ x³ C. 1 - x + x²- x³ D. 1 - 3x + 3x²- x³
		A. I andII quadrants B. II andI<span style="color: rgb(34, 34, 34); font-family:

356	Question Image	"Times New Roman"; font-size: 18px; background-color: rgb(255, 255, 248);">I<span style="color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 18px; background-color: rgb(255, 255, 248);">I quadrants C. <span style="color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 18px; background-color: rgb(255, 255, 248);">I<span style="color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 18px; background-color: rgb(255, 255, 248);">I and<span style="color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 18px; background-color: rgb(255, 255, 248);">I<span style="color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 18px; background-color: rgb(255, 255, 248);">V<span style="color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 18px; background-color: rgb(255, 255, 248);">quadrants D. none of these
357	The 6th term of the sequence 7,9,12,16.....is	A. 27 B. 32 C. 20 D. 19
358	The condition for polynomial equation ax2 + bx + c = 0 to be quadratic is	A. a > 0 B. a < 0 C. a≠ 0 D. a≠ 0,b ≠ 0
359	For any set B, BUB' is	A. Is set B B. Set B' C. Universal set D. None of these
360	Question Image	A. A variable B. A constant C. 0 D. None of these
361	Question Image	A. G.P B. H.P. C. A.P. D. No particular sequence
362	Question Image	A. cosec x + c B. -cosec x + c C. -sec x + c D. sec x + c
363	If a,b c are sides of a triangle taken in order then a x b =	A. b x c B. b x a C. cxa D. Both a & b
364	The area of sector with central angle of 1 radians in a circular region whose radius is 2 m is	
365	The circular measure of the angle between the hands of a watch of 4 0'clock is	A. π/2 B. π/4 C. 2π/3 D. π/6
366	Question Image	
367	Question Image	
368	Question Image	
369	Question Image	A. ⁿC_r B. ⁿ⁺¹C_{r+1} C. ⁿC_{r+1} D. None
370	For two vector a and b, a+b = _____	A. a b B. b+a C. b-a D. None
371	A function f is said to be an even if f(-x) =	A. 0 B. 1 C. f(x) D. -f(x)
372	The contra positive of p → q is	A. q → p B. ~q→~q C. ~p→~q D. None of these
373	√(-1b) =2	A. b i B. -i b

373	√(-1b) =?	C. b2 D. i√b
374	Question Image	A. cos x + c B. -sin x + c C. -cos x + c D. sin x + c
375	Question Image	A. -2 B. -1 C. 1 D. 2
376	Any point, where f is neither increasing nor decreasing and f(x) = 0 at that point, is called a	A. Minimum B. Maximum C. Stationary point D. Constant point
377	Every identity matrix is	A. Row-vector B. Scalar C. Column-vector D. All
378	The system of measurement in which the angle is measured in radians is called the	A. circular system B. CGS system C. sexagesimal system D. none of these
379	Question Image	
380	Question Image	
381	Question Image	A. an A.P. B. a G.P. C. a H.P. D. None of these
382	x = _____ is in the solution of 2x - 5 > 0	A. 0 B. 2 C. -2 D. 3
383	Question Image	
384	$(x + 2)^2 = x^2 + 4x + 4$ is	A. A linear equation B. A cubic equation C. A quadratic equation D. None
385	The number of subset of {0} is	A. 1 B. 2 C. 3 D. None
386	If $f(x) = x^2$ then f(2) is	A. -2 B. 2 C. 4 D. -4
387	Question Image	
388	If $\sin x + \sin^2 x = 1$, then the value of $\cos^{12} x + 3\cos^{10} x + 3\cos^8 x + \cos^6 x + 2\cos^4 x + \cos^2 x - 2$ is equal to	A. 0 B. 1 C. 2 D. sin²x
389	Question Image	A. 0 B. 8 C. 5 D. 9
390	If B-A≠φ , then n(B-A) is equal to	A. n(a)+n(c) B. n(c)-n(a) C. n(a)-n(c) D. None of these
391	The net of cartesian product AxB consists of	A. domain B. range C. binary relation D. ordered pair
392	The multiplicative inverse of -1 in the set {1-, 1} is	A. 1 B. -1 C. +-1 D. 0
		A. Column matrix

393	The transpose of a square matrix is a	B. row matrix C. Inverse matrix D. None of these
394	2x = 3 is a conditional equation it is true for	A. 2 B. 3 C. 3/2 D. 2/3
395	If the lower limit of an integral is a constant and the upper limit is a variable, then the integral is a	A. Constant function B. Variable value C. Function of upper limit D. All
396	Question Image	
397	Question Image	
398	All letters of the word "AGAIN" are permuted in all possible ways and the words so formed (with or without meaning) are written as in dictionary, then the 50th word is	A. NAAGI B. NAAIG C. IAANG D. INAGA
399	Question Image	
400	Range of $\operatorname{cosec}\theta$ is	A. W - {y | -1 < y < 1} B. R - {y | -1 < y < 1} C. O - {y | -1 < y < 1} D. R
401	Question Image	
402	Question Image	
403	What is the number of elements of the power set of {0, 1}	A. 1 B. 2 C. 3 D. 4
404	If x - 2 is a factor of ax2- 12x + a = 2a, then a = _____	A. -5 B. 5 C. 0 D. 1
405	If $f(x) = x^2-x$ then f(0) is	A. 0 B. 1 C. 2 D. 3
406	Sine is a periodic function and its period is _____	A. π B. s C. 2π D. 4π
407	Question Image	A. x²+ 2 B. 3x + 2 C. 3x²+ 5 D. 3x²+ 2
408	Question Image	
409	Question Image	B. a = b , h = 0 C. f = g, h = 0 D. h = h, c = 0
410	The number of significant numbers which can be formed by using any number of the digits 0, 1, 2, 3, 4 but using each not more than once in each number is	A. 260 B. 356 C. 410 D. 96
411	The slope of the normal at the point $(at^2, 2at)$ of the parabola $y^2= 4ax$ is	A. 1/t B. t C. -t D. -1/t
412	Question Image	B. ln(x²- x + 1) + c D. ln(2x - 1) + c
413	The distance of the plane 2x - 3y + 6z + 14 = 0 from the origin is	A. 14 B. 2 C. -2 D. 11

414	If a set S contains "n" elements then P (S) has ..... number of elements	A. 2ⁿ B. 2²ⁿ C. 2 . n D. n²
415	If y = 2x , then	A. y1 -ln2y = 0 B. y2-(ln2)2 y = 0 C. y2-(ln2)y1 = 0 D. All are correct
416	The point of concurrency of the medians of a triangle is called	A. incentre B. circumcentre C. e-centre D. centroid
417	Question Image	A. 1760 B. -193 C. 223 D. none of these
418	The number of real tangents that can be drawn to the ellipse $3x^2+ 5y^2= 32$ passing thro. (3, 5) is	A. 0 B. 1 C. 2 D. Infinite
419	$1^0=$ _____	
420	If the angle between two vectors u and v is 0 orπ, then the vectors u and v are:	A. Orthogonal B. Collinear C. Perpendicular D. None of these
421	The distance between the points (0 , 0) and (2, 1) is	A. 5 C. 0 D. 3
422	A function∫ will have an inverse function if and only if it is a	A. onto function B. into function C. Constant D. one-one function
423	Question Image	
424	The value of $\sin^2 20° + \sin^2 70°$ is equal to	A. 1 B. 2 C. -1 D. 1/2
425	A quadratic equation in x is an equation that can be witten in the form	A. ax²+ b = 0 B. ax³ +b²+c=0 C. ax² +bx+c=0 D. ax³ +bx³+cx=0
426	Question Image	
427	The slope of the tangent at the point (h,h) of the circle x2 +y2 =a2 is	A. 0 B. 1 C. -1 D. h
428	The two lines y = 2x and x =2y are	A. Parallel B. Perpendicular C. Equally inclined with axes D. Congruent
429	The radius of the circle $(x - 1)^2+ (y + 3)^2= 61$ is	A. 8 B. 4 C. 64 D. None of these
430	Apollonius was a	A. rocket B. Muslim scientist C. Greek mathematicians D. method of finding conics
431	Question Image	
432	Question Image	
433	System of linear equation is inconsistent if	A. System has no solution B. System has one solution C. System has two solution D. None of above
434	Question Image	
		A. 3 B. 2

435	Question Image	C. 8 D. 0
436	The set of all antiderivaties of f(= ∫f(x)dx) is the	A. Definite integral B. Indefinite integral C. Integral D. Area
437	Multiplicative inverse of "1" is	A. +- 1 B. 0 C. 1 D. None of these
438	Question Image	A. 1 B. 2 C. 3
439	Question Image	
440	If $x^3+ ax^2- a^2x - a^3$is divided by x + a, then the remainder is	A. 0 B. a³ C. 2a³ D. -2a³
441	120°=_____	
442	If a variable y dependents on a variable x in such a way that each value of x determines exactly one value of y, then we say that	A. x is function of y B. y is a function of x C. y is independent variable D. x is real valued function
443	Domain of cos x is _____	
444	The equation $x^2+ y^2= 0$ represents	A. A circle B. A degenerate circle C. An empty set D. A st. line
445	General solution of tan 5θ= cot $2\theta$is	
446	150°= _____	
447	Tan(α-β)=	
448	Question Image	A. Reflexive property B. Symmetric property C. Transitive property D. Additive property
449	If the cutting plane is parallel to the axis of the cone and intersects both of its nappes, then the curve of intersection is	A. an ellipse B. a circle C. a parabola D. a hyperbola
450	Every term of a G.P. is positive and also every term is the sum of two preceding terms. Then the common ratio of the G.P. is	
451	$2\pi+\theta$will have terminal side in Quad	A. I B. II C. III D. IV
452	Question Image	A. mx B. x/m C. mx^{m-1} D. xm^{m-1}
453	Question Image	
454	Question Image	
455	Question Image	
456	The set of points {(x,y)|y = f(x), ∀ x∈} is called	A. Relation B. Graph of f C. Function D. All are correct
457	The trigonometric equation contains..... trigonometric functions	A. At least one B. At most one C. Exactly one D. None
458	If 5,7 and 9 are A.Ms between a and b, then a	A. 2 and 12 B. 1 and 10

458	and b is equal to	C. 3 and 11 D. -7 and 2
459	For a positive integer n	A. n! = n(n + 1) B. n! = n(n+1)! C. n! = n(n - 1) D. n! = n(n - 1)!
460	Question Image	
461	Question Image	
462	Question Image	
463	Question Image	A. -10 B. 10/7 C. -10/7 D. -7/10
464	Three right angles is the angle of measure	A. 270° B. 180° C. 90° D. 270'
465	Every prime number is also	A. Rational number B. Even number C. Irrational number D. Multiple of two numbers
466	If nis positive integers, then $2^n>2n+1$, only when	A. n≤ 3 B. n≥ 3 C. n≤ 2 D. n≤ 1
467	The equation of the line through (-8, 5) having slope undefined is:	A. y + 8 = 0 B. y = 8 C. y = x + 8 D. x + 8 = 0
468	The square matrix A is skew-symmetric when At =	A. -B B. -C C. -A D. -D
469	There may be _____ feasible solution in the feasible region	A. Infinite B. Finite C. Defined D. None of above
470	Question Image	A. 360° B. 180° C. 90° D. None of these
471	In a triangle if a > 45°,β > 30° then y cannot be	A. 90° B. 100° C. 10° D. 120°
472	Question Image	
473	Question Image	
474	Question Image	A. x C. y
475	Question Image	A. Linear equation B. Quadratic equation C. Cubic equation D. None of these
476	Question Image	
477	If $f(x) = -x^3$then f(-2) is	A. -2 B. -4 C. -8 D. 8
478	The maximum value of $\sin\theta\cos\theta$is	A. 1 B. 1/2 C. 1/4 D. 1/6
479	The equation of the normal to the circle $x^2+ y^2=$ 25 at (4, 3) is	A. 3x - 4y =0 B. 3x - 4y =5 C. 4x + 3y = 5 D. 4x + 3y = 25

480	A bag contains 5 white, 7 red and 5 black balls. If four balls are drawn one by one with replacement, the probability that none is white is	A. (11/16)² B. (5/16)² C. (11/16)⁴ D. (5/16)⁴
481	If a +b +c =0 then which of the following is true	A. a =b =c =0 B. a,b =b,c =c,a C. a xb=b xc =c xa D. None
482	Question Image	A. 1 B. 5 C. 7 D. 9
483	Question Image	A. 15 B. 15 i C. -15 i D. -15
484	Fifteen girls compete in a race. The first three places can be taken by them in	A. 3! ways B. 12! ways C. 15 x 14 x 13 ways D. 42 ways
485	Tan 2$\theta=$	
486	Question Image	
487	Question Image	A. Polynomial of degree 0 B. Polynomial of degree 1 C. Polynomial of degree 2 D. Polynomial of degree n
488	Question Image	B. 6x + 2 + c C. 6x + x²+ c D. 6x³+ x²+ x
489	Question Image	A. 0 B. 1 C. 2 D. 3
490	The general solution of tan 3x = 1 is	
491	3x + 4 = 0 is	A. not inequality B. equation C. identity D. inequality
492	Question Image	B. 1 C. 2 D. -2
493	The sum of all odd numbers between 100 and 200 is	A. 6200 B. 7500 C. 6500 D. 3750
494	An equation of the form ax + by = k is homogeneous linear equation when	A. b = 0, a = 0 B. a = 0,b ≠ 0 C. b = -0,a≠ 0 D. a≠ 0,b≠ 0, k = 0
495	The null vector is regarded to be perpendicular to	A. Every vector B. In some cases C. Both a b D. None
496	The set of all points in the plane that are equally distant from a fixed point to called a	A. Parabola B. ellipse C. Hyperbola D. Circle
497	Multiplicative inverse of "1" is	A. 0 B. ±1 C. 1 D. {0,1}
498	A declarative statement which may be true or false but not both is called a	A. Hypothesis B. Proposition C. implication D. conjunction
499	An implication of p and q is denoted by	
		A. 30°

500	Question Image	B. 45° C. 60° D. 75°
501	Question Image	A. (3, 1, -2) B. (3, -2, 1) C. (2, -1, 3) D. (-1, -2, -3)
502	According to Aristotle, in preposition there could be	A. One possibility B. Two possibility C. three possibility D. Seven possibilites
503	The medians of a triangle are:	A. Collinear B. Concurrent C. Perpendicular D. zero
504	If|a| =|b| = |a+b|=1, then|a-b| is equal to:	A. 1 B. √3 C. √2 D. 7
505	Question Image	
506	The ratio in which the line y- x+ 2 =0 divides the line joining (3,-1) and (8,9) is	A. 2:3 B. -2:3 C. 3:2 D. -3:2
507	If k2x2 +2hxy- 4y2 =0 represents two perpendicular lines then	A. k = 2 B. k = ±2 C. k = -2 D. k ≠0
508	Question Image	A. 0 B. 1 C. 2 D. 3
509	Question Image	A. -3 B. -7 C. 1 D. 0
510	The roots of the equation $ax^2+ bx + x = 0$ are real and distinct if	A. b²- 4ac <0 B. b²- 4ac = 0 C. b²- 4ac > 0 D. None of these
511	A vector of magnitude zero is called	A. Position vector B. Null vector C. Free vector D. None of these
512	Question Image	
513	The two parts into which 57 should be divided so that their product is 782 are	A. 43,14 B. 34,23 C. 33,24 D. 44,13
514	Express cos 320^o between $0^o$and 45^o	A. cos 45^o B. cos 30^o C. -cos 40^o D. cos 40^o
515	y=0 of the parabola $y^2 = 4ax$ is the	A. equation of directirx B. Equatio of the tangent C. Equation of axis D. equation of latus rectum
516	f(x) = log x + 3 is a	A. trigonometric function B. algebraic function C. exponential function D. logarithmic function
517	Question Image	
518	The physical quantity which can be specified by a number alongwith unit is called a	A. scalar B. vector C. constant D. none of these
519	For all points (x,y) in fourth quadrant	A. x > 0 , y < 0 B. x > 0 , y > 0 C. x < 0 , y < 0

		D. x < 0 , ȳ > 0
520	Question Image	A. a B. 2a C. 3a D. 4a
521	If $a_1$and r are the first term and the common ratio respectively then (n + 1)th term of the G.P. is	A. 0 B. a₁rⁿ⁻¹ C. a₁rⁿ⁺¹ D. a₁rⁿ
522	$\forall a,b,c \in R, a > b \wedge b > c \Rightarrow a > c$ is	A. Trichotomy property B. Transitive property C. Symmetric property D. Additive property
523	Question Image	B. ln(x²- x + 1)⁴+ c
524	Question Image	
525	Cofactor of an element aij denoted by Aij is	A. (-2)i+j B. Mij C. (-1)i+j Mij D. None of above
526	If 2x +y + λ =0 is normal to parabola y2 =-8x,λ= _____	A. 12 B. 8 C. 24 D. -24
527	The distance of the point (2,3) from y-axis is	A. 2 B. 3 C. 5
528	The point lying on the terminal rat of -270° is	A. (1,0) B. (0,-1) C. (0,1) D. (-1,0)
529	w^{29}= _____	A. 0 B. 1 C. w D. w²
530	Question Image	
531	The term independent of x is the expansion $(x^3+1/x)^{12}$	A. 295 B. 495 C. 395 D. 722
532	An equation containing at least one derivative of a depends variable with respect to independent variable is a (an)	A. Implicit equation B. Differential equation C. General equation D. None of these
533	Question Image	A. 1/2 B. 2 C. 1/4 D. 4
534	The solution set of x^2- 5x + 6 = 0 is	A. {1, 3} B. {2, 3} C. {1, 2} D. None of these
535	Question Image	
536	Question Image	
537	Question Image	
538	f(x)g(x)- ∫g(x) f′(x) dx is equal to	A. ∫f(x)g′(x)dx B. ∫f′(x)g(x)dx C. ∫f′(x)g(x)′dx D. ∫f(x)g(x)dx
539	Range of tan$\theta$is	A. Set of complex numbers B. Set of real numbers C. Set of odd numbers D. Set of positive integers only
540	Question Image	A. A rational number B. An irrational number C. An odd number D. A prime number

541	The third term of the sequence $a_n = (-1)^{n-1}(n-7)$ is _____	A. 8 B. 4 C. -4 D. 8
542	Question Image	A. A(α) - A(β) B. A(α) + A(β) C. A(α-β) D. A(α+β)
543	The equation of the circle with centre (-h, -k) and radius r is	A. (x +h)²+ (y+k)²= r² B. (x +h)²+ (y-k)²= r² C. (x -h)²+ (y+k)²= r² D. (x -h)²+ (y-k)²= r²
544	Question Image	A. 0 B. 1 C. 2 D. 4
545	Question Image	A. Three Independent Variables B. Two independent constant C. Three independent parameters D. Three independent constant
546	If w is a cube root of unity then $1 + w + w^2$= _____	A. 1 B. 2 C. 0 D. -1
547	Question Image	
548	Question Image	
549	If the cutting plane is parallel to the axis of the cone and intersects both of its nappes, then the curve of intersection is:	A. an ellipse B. a circle C. a parabols D. a hyperbola
550	The matrix A = [aij]1xn is a	A. Vector B. Rectangular matrix C. Column vector D. Square matrix
551	If A is such that a,A,B are in A.P then A is called	A. A.M B. Common ratio C. Common difference D. None of these
552	Question Image	A. 3/4 B. -3/4 C. 4/3 D. -4/3
553	Three dice are thrown together. The probability of getting a total of at least 6 is	A. 103 / 108 B. 10 / 216 C. 93 / 108 D. None of these
554	Two positive integers whose sum is 30 and their product will be maximum are	A. 12,18 B. 10,20 C. 15,15 D. 14,16
555	The value of x and y when (x + iy)2 = 5 - 4i	A. x = 2, y = -1 B. x = -2, y = 1 C. x = 2, y = -i D. x = 2, y = 2
556	Question Image	
557	A circle is a limiting case of an ellipse whose eccentricity	A. Tends to a B. Tends to b C. Tends to 0 D. Tends to a + b
558	Question Image	
		A. Chord

559	A line joining two distinct points on a parabola is called a _____ of the parabola.	B. Tangent C. Lust rectum D. directrix
560	The distance between two parallel lines 2x - 5y + 13 = 0 and -2x +5y -6 = 0 is:	A. √29 B. 8/√29 C. 7 /√29 D. 29√7
561	How many arrangements of the letters of the word PAKISTAN cab be made	
562	A matrix in which the number of rows is equal to the number of columns is called a	A. Diagonal matrix B. Rectangular matrix C. Square matrix D. Scalar matrix
563	If θ be angle between u,v and u,v determine the sides of a triangle then the third side opposite to angle θ has length	A. |u+v| B. |u|+|v| C. |u-v| D. |u|-|v|
564	Question Image	
565	The transport of a rectangular matrix is a	A. Square matrix B. Rectangular matrix C. Row matrix D. Column matrix
566	If cos (2 sin-1 x) = 1/9 , then what is the value of x?	A. 1/3 B. -2/3 C. 2/3 D. 2/3 , -2/3
567	Question Image	
568	The quadratic equation 8 $\sec^2\theta$- 6 secθ+1 = 0 has	A. Infinitely many roots B. Exactly two roots C. Exactly four roots D. No roots
569	Question Image	
570	If no two elements of ordered pairs of a function from A onto are the same, then it is called.	A. Surjective B. Injuctive C. Bijective D. on to
571	(a, b) + (-a, -b) =	A. (0,0) B. (a, b) C. (-a, -b) D. (1, 1)
572	Z is the set of integers, (z, *) is a group with a * b = a + b + 1, a, b $\in$G. then inverse of a is	A. -a B. a + 1 C. -2 -a D. None of these
573	Domain of y = cot x = _____	
574	If (2,0) is the vertex and y-axis is directrix of parabola then focus is	A. (2,0) B. (-2,0) C. (4,0) D. (-4,0)
575	$5x^3$+ 3x - is a _____	A. Polynomial of degree 3 B. Polynomial of degree 2 C. Polynomial of degree 1 D. Polynomial of degree 0
576	Question Image	A. A natural number B. A rational number C. An irrational number D. A whole number
577	Under multiplication, solution set of is	A. Groupoid B. Abelian group C. Semi group D. All of these
578	A quadratic equation has two	A. roots B. degree C. variables D. constants
579	Question Image	
		A. Diagonal matrix

580	A matrix in which the number of rows is not equal to the number of columns is called a	B. Rectangular matrix C. Square matrix D. Scalar matrix
581	Question Image	A. perpendicular vectors B. parallel vectors C. concurrent vectors D. none of these
582	Circumcentre of the triangle, whose vertices are (0, 0), (6, 0) and (0, 4) is	A. (2, 0) B. (3, 0) C. (0, 3) D. (3, 2)
583	Question Image	D. all
584	Question Image	
585	A tower subtends an angleαat a point on the same level as the root of the tower and at a second point, b meters above the first, the angle of depression of the foot of the tower isβ. The height of the tower is	A. b cotαtanβ B. b tanαtanβ C. b tanαcotβ D. None of these
586	A semi-group having an identity is called a	A. groupoid B. non-commutative C. abelian D. monoid
587	If A is a raw vector, then its transpose is a	A. Row vector B. Diagonal matrix C. Identity matrix D. None of these
588	The 7th term of $(3^8 + 6^4x)^{11/4}$ is	A. -19217/3 x⁶ B. 189/2 6⁴x C. 2227/12 x³ D. -19712/3 x⁶
589	If $x^3 - x^2 + 5x + 4$ is divided by x - 2, then the reminder is	A. 0 B. 2 C. 18 D. 14
590	$x^2 + x - 5 = 0$ is	A. A polynomial B. An inequality C. An identity D. None
591	If Z = (1,2), then Z^{-1} =?	A. (0.2, 0.4) B. (-0.2 ,0.4) C. (0.2,-0.4) D. (-0.2,-0.4)
592	d/dx (cosec x)	A. -sec x tan x B. sin x cos x C. -csc x cot x D. 2sin x cos x
593	The distance of the point (-2 , -3) from x-axis is	A. 2 B. -3 C. 3 D. 5
594	Question Image	
595	The number of subsets of B = {1,2,3,4,5}	A. 10 B. 32 C. 16 D. 5
596	for n€ N, 3^{2n+7} is divisible by	A. 7 B. 8 C. 9 D. 10
597	(1, 1) is the in the solution of the inequality	A. 3x + 4y > 3 B. 2x + 3y < 2 C. 4x = 3y > 5 D. 2c - 3y > 2
598	Question Image	

599	The parabolay2=4ax open up if	A. a<0 B. a≠0 C. a>0 D. All are incorrect
600	Express as a sum or difference: 2 sin $5\theta\cos\theta$	A. cos 4θ- cos 2θ B. sin 4θ+ sin 2θ C. cos 4θ+ cos 2θ D. sin 4θ- sin 2θ
601	The solution set of the equation 1 + Cos x = 0 is _____	D. none of these
602	Question Image	A. sec 5x + c B. - sec 5x + c
603	Question Image	
604	Question Image	
605	If a polynomial p(x) is divided by x-c, then the remainder is	A. p(x) B. x-c C. c D. P(c)
606	Question Image	
607	A point (x,y) which satisfy a linear inequality in two variables form its	A. Solution B. Domain C. Range D. None
608	Question Image	
609	Question Image	
610	The extraction of a cube root of a given number is a	A. Binary operation B. Unary operation C. group D. multiplicative inverse
611	If A and B are two matrices of order B X B then, AB = A iff	A. B=1 B. B=A C. B=A^(-2) D. B =B²
612	If x^3+4x^3-2x+5 is divided by x - 1, then the reminder is	A. 8 B. 6 C. 4 D. None of these
613	The set of rational numbers is subset of	A. The set of natural numbers B. The set of real numbers C. The set of integers D. The set of whole numbers
614	If A = $[a_{ij}]$ is (m x n) matrix, then transpose of A is of the order	A. m x m B. m x n C. n x n D. n x m
615	Question Image	A. A prime number B. An integer C. A whole number D. An irrational number
616	In quadratic equation $f(x) = ax^2$,if a >0, then the graph of parabola	A. Opens up B. Opens down C. close up D. symmetric w.r.t.x.axis

617	If the points (a,b), (x,y) and (a-x, b-y) are collinear, then ay =	A. bx B. b-y C. a-x D. x
618	Question Image	
619	While writing his books on geometry, Euelid used	A. Inductive method B. Deductive method C. Implication D. proposition
620	The sum if 1,3,5,7,9..... up to 20 terms is	A. 400 B. 472 C. 563 D. 264
621	A number A is said to be the A.M between the two numbers a and b if a, A, b are in	A. A.M B. A.P C. G.P D. G.M
622	Question Image	
623	cos (α+β) + cos (α-β) =	A. 4 cosαcosβ B. 2 cosαcosβ C. 2 sinαsinβ D. 2 sinαcosβ
624	(2.02)4 s equal to	A. 16 B. 16.6496 C. 17 D. 18
625	A triangle has six	A. side B. elements C. angle D. tangents
626	The period of the function f(x) = $\sin^4 x + \cos^4 x$ is	A. π B. π/2 C. 2π D. None of these
627	Question Image	A. b = c B. a = c C. a = c D. b = 0
628	In how many ways can 5 persons be seated at a round table	A. 5! B. 4! C. 3! D. 120
629	Question Image	
630	Question Image	
631	Question Image	A. Diagonal matrix B. Scalar matrix C. Triangular matrix D. Identity matrix
632	The distance of the point (2,-3) from y-axis is	A. 2 B. -3 C. 1 D. 5
633	What is the circular measure of the angles between the hands of which at 4 o clock	A. π/6 B. 3π/2 C. π/4 D. 2π/3
634	Question Image	
635	The function f{(x, y) | y = ax^2+ bx + c} is	A. One-one function B. Constant function C. Onto function D. Quadratic function

636	Question Image	A. (g,f) B. (-g,f) C. (g,-f) D. (-g,-f)
637	Range of cos$\theta$is	
638	If no two elements of ordered pairs of a function from A onto B are the same, then it is called	A. surjective B. injuctive C. bijective D. on to
639	If f(x) = x^3- $2x^2$+ 4x -1, then f(-2) = ?	A. 0 B. -25 C. 5 D. 45
640	cot(3π/2 -θ)=_____;	A. tanθ B. cotθ C. -tanθ D. -cotθ
641	The sum of first 60 natural numbers is	A. 1830 B. 3660 C. 1640 D. 1770
642	Question Image	C. x²+ 2x + c D. (x²+ 2x -1)⁴+ c
643	Question Image	D. all are correct
644	θ and 2kπ+θ are the _____ angles	A. Quadrantal angles B. Coterminal C. Allied D. None
645	If A∩B=B, then n(A∩B) is equal to	A. n(a) B. n(a)+n(c) C. n(c) D. None of these
646	The law of sines can be used to solve oblique triangle when following information is given:	A. Two angles and a side B. Two sides and an angle opposite one of the given sides C. Two sides and the angle between two sided D. Option a and b
647	How many signals can be given by 5 flags of different colours, using 3 flags at a time	A. 120 B. 60 C. 24 D. 15
648	Question Image	A. image B. pre-image C. constant D. none of these
649	∫x sin xdx is equal to:	A. sin x/x + cos x B. sin x - cos x/x C. x cos x + sin x D. - x cos x + sin x
650	If P = {x/x = p/q where p,q∈ Z and q≠ 0}, then P is the set of	A. Irrational numbers B. Even numbers C. Rational numbers D. Whole numbers
651	Which of the following points is a pont of intersection of the curve x+y = 8 and the straight line 2x - y =2.	A. -2,-2 B. 2,2 C. 0.4,2.8 D. 0,1
652	If the cutting plane is parallel to the axis of the cone and intersects both of its nappes, then the curve of intersection is	A. an ellipse B. a hyperbola C. a circle D. a parabola
653	The number of 5-digit number that can be formed from the digits 1,2,4,6,8, when 2 and 8 are never together is	A. 72 B. 48 C. 144 D. 20
654	An experiment yields 3 mutually exclusive and exhaustive events A, B, C, if P(A) =2 and P(B) = 3. then P(C) =	A. 1 / 11 B. 2 / 11 C. 3 / 11 D. 6 / 11
655	Question Image	

656	The distance between the points (1, 2) and (2, 1) is	A. 3 B. 6
657	F(x) = x^xdecreases in the interval	A. (0, e) B. (0, 1) C. (-∞,0) D. None
658	For non-trival solution |A| is	A. A = 0 B. A^t= 0 C. |A| = 0 D. None of these
659	Deductive logic in which every statement is regarded as true or false and there is no other possibility is called:	A. Deductive logic B. Inductive logic C. Aristotlian logic D. Non-Aristotlian logic
660	If the elevation of the sun is 30°, then the length of the shadow cast by a tower of 150 ft height is	
661	Question Image	A. p and q B. p or q C. p implies q D. p is equivalent to q
662	a rectangular array of numbers in rows and columns is called a	A. Matrix B. Element C. Determinants D. entries
663	Te order of the differential equation of all conics whose axes coincide with the axes of co-ordinates is	A. 2 B. 3 C. 4 D. 1
664	cos2a=_____;	A. cos2 a-sin2 a B. 2cos2 a-1 C. 1-2 sin2 a D. All of these
665	There are 50 students in a class out of these 38 used desktop computers, 16 out of these used laptop. It is noted that five student neither use laptop or computer. The students having both laptop and computer are A. Based on the information find out the greatest value of A	A. 36 B. 4 C. 16 D. 30
666	Addition is not operation on	A. Natural numbers B. Even numbers C. odd numbers D. set of integers
667	The sum of the coefficient in the expansion of $(a + x)^5$is	A. 32 B. 16 C. 8 D. 5
668	~ p is the	A. implication of p B. disjunction of p C. negation of p D. conjuction of p
669	A diagonal matrix in which the diagonal elements are equal is called a	A. Null matrix B. Identity matrix C. Scalar matrix D. Row matrix
670	Question Image	A. sin x + c B. -sin x + c C. cos x + c D. -cos x + c
671	If 6th term of a series in A.P, is -2 and 8th term is -8, the first term of the serie is	A. 13 B. -13 C. 18 D. -10
672	Derivative of x^3w.r.t x is	A. 0 B. 1 C. 3x² D. x³
		A. 0

673	If $3x^4+ 4x^3+ x - 5$ is divided by x + 1, then the reminder is	B. 7 C. -7 D. 5
674	if tanθ = 8/15 and cosθ< 0 , then cscθ =	A. -8/15 B. 15/8 C. 3/15 D. -17/8
675	The horizontal distance between the two towers is 60 m. the angular elevation of the top of the taller tower as seen from the top of the shorter one is 30°. If the height of the taller tower is 150 m, the height of the shorter one is	A. 116 m B. 200 m C. 216 m D. None of these
676	The range of the principle cot function is	
677	The greatest integer which divides the number $101^{100}- 1$ is	A. 100 B. 1000 C. 10000 D. 100000
678	Question Image	A. 0 B. -2 C. 1 D. 4
679	For≥ -2 , 1+3+5+.....+(2n+5)	A. (n+2)² B. (n-2)² C. 2n+1 D. (n+3)²
680	One second is denoted by	A. 1⁰ B. 1' C. 1" D. 1 rad
681	45° = _____	
682	What is the probability of being born on Wednesday?	A. 1/7 B. 1/2 C. 1/3 D. 1/8
683	If $a^x= b^y= c^z$and a, b, c are in G.P. then x, y, z are in	A. A.P. B. G.P. C. H.P. D. None of these
684	Question Image	A. Principle of equality of fractions B. Rule for product of fraction C. Rule for quotient of fraction
685	4/√49 is a	A. Irrational Number B. Prime Number C. Rational number D. Whole number
686	The lines l1and l2intersect. The shortest distance between them is	A. Positive B. Negative C. Zero D. Infinity
687	Question Image	A. c = 0 B. c = -1 C. c = -2 D. c = 1
688	E-radius corresponding to < B is	
689	Question Image	
690	A rule that assigns to each elements x in X a unique element y in Y is called a _____	A. domain B. range C. function D. none of these
691	Question Image	
692	Question Image	A. -1 B. 0 C. 1 D. None of these
693	The number of subsets of a set having three elements is	A. 4 B. 6 C. 8 D. none of these

694	The probability that a slip of number divisible by 4 is picked from the slips bearing numbers 1, 2, 3, ...10 is	A. 1/5 B. 1/4 C. 1/3 D. 1/2
695	Question Image	
696	Bisectors of angles of a triangle are:	A. Collinear B. Concurrent C. Perpendicular D. zero
697	If x,y are two positive distinct numbers then	A. A>G>H B. A<G<H C. A=G=H D. None of these
698	The eccentricity e of an ellipse is always	A. Rational B. Real C. Irrational D. Integer
699	Question Image	A. Cos 2x = sin 4y B. Cos 4y = cos 2x C. Cos 3y = sin 4x D. None of these
700	In translation of axes,_____is shifted to another point in the plane.	A. a-axis B. y-axis C. origin D. Point
701	Question Image	A. quadratic function B. constant function C. linear function D. exponential function
702	Question Image	
703	Projection of vector u along v is	A. |v| cosθ B. |u| cosθ C. |v| sinθ D. |u| sinθ
704	If Cosθ=0, thenθ= _____	A. nπ/2 B. (2n + 1)π/2 C. (2n - 1)π/2 D. (4n + 1)π/2
705	Question Image	
706	The area of a sector of a circular region of radius r is	A. 2π r B. π r² C. 1/2πr² D. π/6
707	Question Image	
708	If a set S contains n elements then P (S) has ..... number of elements	A. 2ⁿ B. 2ⁿ² C. 2.n D. n²
709	If sided of□ABC are 16,20,and 33, then the value of the greatests angle to	A. 150□ 20' B. 132□ 35' C. 101□ 25' D. 160□ 50'
710	$x^4 - 3x^3 + 3x + 1 = 0$ is called _____	A. Reciprocal equation B. Exponential equation C. Radical equation D. None of these
711	An open sentence formed by using the sign of equality "=" is called	A. Equation B. In equation C. True sentence D. False sentence
	The equation of a line parallel to the tangent to	A. 2x + 3y = 0

712	the circle $x^2+ y^2= 16$ at the point (2, 3) and passing thro' the origin is	B. 2x - 3y = 0 C. 3x + 2y = 0 D. 3x - 2y = 0
713	If a matrix has m rows and n columns, then mxn is called the	A. dimension B. determinants C. symmetric D. Column matrix
714	The distance of the point (-2, -3) from the origin is	A. 2 B. -5 C. -3
715	The direction cosines of a line equally inclined with co-ordinate axes are	
716	Question Image	A. (x³- 3x²)⁸+ c D. 3x²- 6x + c
717	Question Image	A. Closure law of addition B. Associative law of addition C. Commutative law of multiplication D. Associative law of multiplication
718	If the intersection of two sets is non-empty, but either is a subset of other are called	A. Disjoint sets B. Over lapping C. Equal sets D. None of these
719	The multiplicative inverse ofx^(-1) is	A. x B. a-2 C. 0 D. 1
720	d/dx (cos x sin x) =	A. cos² x - sin² x B. 2cos²x + sin² x C. 2cos² x - sin² x D. 1 - sin²x
721	f(x) = ax + b will be an identity function if	A. a = 1 , b = 1 B. a = 1 , b = 0
722	Question Image	
723	Question Image	
724	1^0= _____	A. 1.5 rad B. 0.5 rad C. 0.175 rad D. None of these
725	Question Image	
726	Question Image	
727	Question Image	
728	a >b, b >c ⇒a >c is a	A. Multiplicative property B. Additive property C. Trichotomy property D. Transitive property of inequality
729	Order (or sense) of an inequality is changed by multiplying or dividing its each side by a:	A. Zero B. one C. negative constant D. Non negative constant
730	Some of two real numbers is also a real number , this property is called:	A. Commutative property w.r.t addition B. Closure property w.r.t. addition C. Associative property w.r.t. addition D. Distributive property w.r.t addition
731	The sum of the roots of the equation x2 -6x +2 = 0 is	A. -6 B. 2 C. -2 D. 6
732	For which of the following ordered pairs (s, t) is s + t > 2 and s - t < -3?	A. (3, 2) B. (2, 3) C. (1, 8) D. (0, 3)
733	Question Image	A. sin h x B. cos h x C. tan h x D. cot h x
		A. (s - t)²> (t - s)²

734	s > t then	B. (s - t)²< (t - s)² C. (s - t)²= (t - s)² D. None
735	The maximum value of 12 $\sin\theta$-9 $\sin^2\theta$is x	A. 3 B. 4 C. 5 D. None of these
736	2cos2 a/2 =_____;	A. 1+sina B. 1-sina C. 1+cosa D. 1-cosa
737	The set {E,0}, is closed under (ordinary)	A. multiplication B. addition C. subtraction D. division
738	The set which has no proper subset is	A. {0} B. {} C. {∅} D. None of these
739	The middle term of the expansion $(1 + 2x)^6$is _____	A. 1st term B. 4th term C. 2nd term D. 5th term
740	The centre of the conic x2 +16x +4y2 -16y +76 =0 is	A. (0,10) B. (-8,4) C. (-8,-2) D. (1,1)
741	√2 is a number	A. Rational B. Irrational C. Even D. Odd
742	Question Image	A. 1 B. 2 C. 0 D. 4
743	Question Image	A. 0 B. 1 C. -1 D. undefined
744	Question Image	
745	Question Image	D. none of these
746	Name the property used in a (b-c) = ab - ac	A. commutative property of multiplication B. distributive property of multiplication C. associative property of multiplication D. multiplicative inverse
747	The points (5,2),(-2,3),(-3,-4) and (4,-5) are the vertices of:	A. rhombus B. Parallelogram C. rectangle D. square
748	Question Image	
749	In order of A is m x n and order of B is n x p then order of AB is	A. m x m B. n x n C. m x p D. p x m
750	The inclination of a line parallel to x-axis is	
751	Range of sin x is _____	A. [-1, 1] B. R C. Negative real numbers D. None of these
752	The sum of all even numbers less than 100 is	A. 2450 B. 2352 C. 2272 D. 2468
753	Question Image	A. 2x + 3 B. x²+ 3 + c
754	{x|x∈R∧x≠x} is a	A. Infinite set B. Null set C. Finite set

		D. None of these
755	Question Image	A. a tan(ax + b) + c B. - a tan(ax + b) + c
756	${}^{n}C_{2}$= exists when n is _____	
757	Question Image	
758	(ABC)' =	A. CBA' B. CBA C. C' B' A' D. None of these
759	The angles of elevation of the top of a tower at the top and the foot of a pole of height 10 m are 30° and 60° respectively. The height of the tower is	A. 10 m B. 15 m C. 20 m D. None of these
760	sin (α+β) - sin (α -β) =	A. 4 cosαsinβ B. 2 cosαsinβ C. 4 cosαcosβ D. 4 sin αsinβ
761	Question Image	
762	How many comittees of 5 numbers can be chosen from a group of 8 players person when each committee must include 2 particular persons	A. 8! B. 5!3! C. 5! D. 20
763	The multiplicative inverse of -3i is	A. 3i B. -3i C. -1/3i D. 1/3 i
764	Question Image	
765	Question Image	
766	(a +b*i*) -c (c +d*i*) =	A. (a +b) = (c +d) B. (a +c) + i(b +d) C. (a -c) + (c -d)i D. (a -c) +(b -d) i
767	If x-2 and x-1 both are factors of x^3-3x^3+2x-4p, then P must equal to	A. 1 B. 2 C. 0 D. -2
768	The period of tan [x/3] is _____	A. 2π B. 4π C. 3π D. 5π
769	Question Image	A. 2s² B. 2s³ C. s³ D. 3s³
770	Question Image	A. A parabola B. An ellipse C. A hyperbola D. A circle
771	The value of 150^{o} in term of π is	A. 2π/5 <!--[endif]--><o:p></o:p> B. 5π/2 C. 3π/2 D. 2550/32401π
772	A square matrix A = [aij] is lower triangular matrix when:	A. aij = 0 for all i < j B. bij = 0 C. cij = 0

		D. dij =0
773	The coefficient of xn in the expansion of (1-x)-1 is	A. (-1)n2n B. 1 C. (-1)n(n+1) D. (n+1)
774	Riaz, Saba. Maria, Shehzad are to give speeches in a class. The teacher can arrange the order of their presentation in	A. 4 ways B. 12 ways C. 256 ways D. 24 ways
775	The set of rationals numbers between 0 and I is	A. Finite B. Null set C. Infinite D. None of these
776	Question Image	
777	An equation in which at least one term contains dy/dx, d^2 y /dx^2etc, is called.	A. Differential equation B. Initial condition C. General solution D. Singular equation
778	1^0= _____	A. 360' B. 60" C. 60' D. 3600'
779	Each complex cube root of unity is square of	A. itself B. 1 C. -1 D. the other
780	Question Image	
781	Question Image	A. 100 B. -100 C. 0 D. -101
782	The domain of the principle sine function is	
783	By expressing sin 125° in terms of trigonometrical ratios, answer will be	A. sin 65° = 0.9128 B. sin 55° = 0.8192 C. sin 70° = 0.5384 D. sin 72° = 0.1982
784	The point P (5,8) and the origin lie on the side of the line 3x+ 7y+ 15 =0	A. Same side B. P above and origin below C. Opposite side D. P below and origin above
785	The obtuse angle between lines = -2 and y = x +2 is	A. 120° B. 135° C. 150° D. 140°
786	The set of the first elements of the orders pairs forming a relation is called its	A. Relation in B B. Range C. Domain D. Relation In A
787	The differential equation representing the family of curves y = A cos (x + B), where A, B are parameters, is	
788	If y is an image of x under the function f, then we write	A. y = f(x) B. x = f(y) C. y = x D. none of these
789	Name the property used in 4 x (5 x 8) = (4 x 5) x 8	A. Associative property of addition B. Associative property of multiplication C. Additive identity D. Multiplicative identity
790	f 2x -1/x2 -x-1 dx = _____	A. ln (2x-1)+c B. (2x-1)+c C. 0 D. ln (x²-x+1)+c
791	Question Image	
792	Question Image	
793	sn (2sin-10 8)	A. 0.56 B. 0.69

793	sin (2sin-1 0.8)	C. -0.16 D. 0.96
794	Question Image	
795	The graph of a quadratic function is	A. Circle B. Ellipse C. Parabola D. Hexagon
796	Question Image	A. Singleton set B. A set with two points C. Empty set D. None of these
797	The set { 1 , -1} is closed w.r.t.	A. Addition B. Multiplications C. Subtraction D. None of these
798	If A is a matrix of order 3x3 and I is an identity matrix of order 3x3 , then AI=	A. A B. I C. Not possible D. A^(-1)
799	Question Image	
800	Question Image	A. x³ B. 3x² C. 3x D. 3
801	If $ax^2 + bx + x = 0$ is satisfied by every value of x, then	A. b = 0, c = 0 B. c = 0 C. b = 0 D. a = b = c = 0
802	Differentiating the equation $e^2x/x+1$ with respect to X is given by	A. (2x +1) e²x/(x+1)² B. 2xe^{2x}/(x+1)² C. 2e^{2x}/(x+1)² D. (x+1)e^{2x}/(x+1)²
803	The set { {a, b} } is	A. Infinite set B. Singleton set C. Two points set D. Empty set
804	The mid point of the line segment joining the points (a,b) and (b,a) is	
805	The 26th term of the A.P -2,-4,10,.....is	A. 136 B. -136 C. 148 D. -148
806	Optimize means _____ a quantity under certain constraints	A. Minimize B. Maximize C. Maximize or minimize D. None of these
807	Question Image	
808	The number of words that can be formed out of the letters of the word ASSASSINATION is	
809	A fraction in which the degree of the numerator is greater than or equal to the degree of the denominator is called	A. A proper fraction B. An improper fraction C. An equation D. An identity
810	Question Image	
811	The transpose of a row matrix is a _____	A. Zero matrix B. Diagonal matrix C. Column matrix D. Row matrix
812	0 (zero) is	A. An irrational number B. A rational number C. A negative integer D. A positive number
813	Question Image	A. -1 B. 1 C. 2 D. -2
		A. Set of Natural numbers

814	The set {1, 2, 3, 4, ...} is called	B. Set of whole numbers C. Set of rational number D. Set of irrational numbers
815	Question Image	
816	Question Image	
817	The line 2x +√6y =2 is a tangent to the curve x2 -2y2 =4 The point of contact is	A. (√6,1) B. (2,3) C. (7,-2√6) D. (4,-√6)
818	A line segment whose end points lie on a circle is called	A. the secant of the circle B. the arc of the circle C. the chord of the circle D. the circumference of the circle
819	Question Image	
820	Question Image	A. Less then 1 B. Equal to 1 C. Greater than 1 but less then 2 D. Greater then or equal to 2
821	The set of integers is a subset of	A. The set of natural numbers B. The set of whole numbers C. The set of prime numbers D. The set of rational numbers
822	The angle between the vectors u = [-3 , 5] and v = [6 , -2] is:	A. π/2 B. -3π/2 C. π D. None of these
823	ax2 +2hxy +by2 +2gx +2fy +c =0 may represent an ellipse if	A. h2 -ab <0 B. h2 -ab≠ 0 C. h2 -ab =0 D. h2 -ab >0
824	How many numbers are there between 103 and 750 which are divisible by 6	A. 125 B. 107 C. 108 D. 113
825	Question Image	
826	Question Image	A. 8th B. 10th C. 7th D. 3rd
827	Question Image	A. Two real roots B. Two positive roots C. Two negative roots D. One positive and one negative root
828	Question Image	
829	If uv= Projuv then	A. Uandvare parallel B. vis a unit vector C. Uis a unit vector D. Both b and c
830	The conjunction of 3>5 , and 5>9, is	A. False B. True C. Disjunction D. Unknown
831	Question Image	
832	The intercepts of the plane 2x - 3y + 4z = 12 on the co-ordinate axes are given by	A. 2, -3, 4 B. 6, -4, -3 C. 6, -4, 3 D. 3, -2, 1.5
833	How many terms of the A.P 3,6,9,12,15.....must be taken to make the sum 108	A. 8 B. 6 C. 7 D. 36
834	$(0.90)^{1/2}$is equal to	A. 0.99 B. 0.90 C. 0.80 D. 0.88
	The approximate increase in the area of a	A. 0.4cm B. 8.8πcm

835	circular disc if its diameter increased form 44cm to 44.4cm is	C. 17.6 πcm D. 35.2πcm
836	Question Image	A. e^x+ c B. e^{-x}+ c C. x e^x+ c D. not possible
837	Find the geometric mean between 4 and 16	
838	21.256^{o}	A. 21^o15'21" B. 21^o20'56" C. 21^o25'1" D. 21^o25'6"
839	If $f(x) = 1/x-2$ then $f^{1}(0)$ equals:	A. -1/4 B. -3/2 C. -1/2 D. 1/5
840	The coordinates of the point that divides the join of A(-6,3) and B(5, -2) in the ratio 2:3 externally are	
841	If the function y=2x -3, what is the preimage of 11?	A. 11 B. 7 C. 5 D. 2
842	nCn-r is equal to	A. n! B. n-1Cr C. nCr D. None of these
843	The value of i^{4n+1}	A. 1 B. -1 C. i D. i²
844	Question Image	A. P(A) + P(B) B. P(A) - P(B) C. P(A) . P(B) D. P(A) / P(B)
845	If d_1 is the distance between (0,0) and (1,2) and d_2 is the distance between (0,0) and (-1,-2) the	A. d₁< d₂ B. d₁> d₂ C. d₁= d₂ D. none of these
846	If $f(x) = x^{2/3}$ then $f^{1}(x)$ at x = 8 equals:	A. 8 B. 1/8 C. 1/3 D. 2/3
847	For an arithmetic series to be convergent it is necessary that the series has	A. Finite terms B. d<0 C. Infinite terms D. None of these
848	The law of consines is	
849	The points A, B and C are said to be collinear if they:	A. be on same line B. have same slope C. Lie on a same plane D. options a & b
850	If f (x) is defined and continuous then f (x) is always	A. Rational function B. Trigonometric function C. Logarithmic function D. All are correct
851	The solution of differential equation:	A. dy/dx+y/x = x²is : B. 4xy = x⁴+ c C. 4x = x⁴= c D. 4 y = x⁴+ c E. 4x=4x³ + c
852	If z1 = 2 + 6i and z2 = 3 + 7i then which expression defines the product of z1 and z2	A. 36 +(-32)i B. -36+32i C. 6+(-11)i D. 0, +(-12)i
853	Question Image	A. 100 B. 99 C. 0 D. none of these
854	The slope of x-axis is	A. 0 B. undefined

854	The slope of x-axis is	B. undefined C. 1
855	Period of cos x is _____	
856	Question Image	
857	Question Image	
858	If (2, 3) and (2, 5) are end points of a diameter of a circle, then the centre of the circle is	A. (2, 4) B. (4, 8) C. (0, 2) D. (0, -2)
859	sin(3π/2 -θ)=_____;	A. sinθ B. cosθ C. -sinθ D. -cosθ
860	sin (α+β) + sin (α-β)	A. 2 sinαcosβ B. sin (2αβ) C. sinαcosα D. None of these
861	Question Image	A. 8 B. 9 C. 10 D. 11
862	cos(3π/2 +θ) = _____;	A. sinθ B. cosθ C. -sinθ D. -cosθ
863	If f(x) = x^2-x then f(1) is	A. 0 B. 1 C. 2 D. 3
864	$\sin^2\alpha\cos^2\alpha$=	A. -1 B. 0 C. 1 D. None of these
865	$(x + 2)^2 = x^2 + 4x + 4$ is	A. A linear equation B. A cubic equation C. A quadratic equation D. None
866	The range of y = sin x is _____	A. [1, -1] B. [-1, 1] C. [0, -1] D. [-∞+∞]
867	The axis of the parabola x^2 = 4ay is:	A. y = 0 B. x = 0 C. x = -a D. y = a
868	With usual notations b2 = a2 + c2 -2ac cos is called_____;	A. None of these B. Law of sines C. Law of consines D. Law of tangents
869	If sinθ = 12/13, and sinθ > 0, then tan θ =	A. 2/5 B. 12/13 C. 13/5 D. 12/5
870	The parametric equations of a circle are	
871	Question Image	A. are real no B. both are not real C. are imaginary no D. both are imaginary
872	Cycle tyres are supplied in lots of 10 and there is a chance if 1 in 500 tyres to be defective. Using Poisson distribution, the approximate	A. 9028 B. 9208

	number of lots containing no defective tyre in a consignment of 10, 0000 lots is	C. 9802 D. 9820
873	The value of x, and y, when $(x + iy)^2 = 5 + 4i$	A. X = 2, y = 1 B. X = -2, y = 1 C. X = 2, y = -1 D. X = 2, y = 2
874	The position vector of a point (x, y) in xy plane is	D. none of these
875	30° = _____	
876	The square roots of negative numbers is called	A. Real no B. Complex no C. Positive no D. Negative no
877	The two vertices of a triangle are (-2,4)and (5,4). If its centroid is (5,6), then third vertex is:	A. (-10,12) B. (12,-10) C. (12,10) D. (10,12)
878	If a,β are the roots of ax2+bx+c=0,the equation whose roots are doubled is	A. ay2 +2by+c=0 B. ay2+2by+4c=0 C. ay2+2by+c=0 D. ay2+by+4c=0
879	The expansion of $(1 + 2x)^{-2}$is valed if	A. | x | < 1/2 B. | x | < 1 C. | x | < 2 D. | x | < 3
880	If y=sin(ax+b) then y4=_____:	A. sin4(ax+b) B. a4sin(ax+b) C. a4cos(ax+b) D. None of these
881	The general solution of the differential equation x dy / dx = 1 + y is:	A. 2 B. 1 C. 3 D. None
882	The magnitude of a vector can never be	A. Zero B. Negative C. Positive D. None of these
883	The proposition S(n) for any n∈ N is only true if k∈ N and	A. S(k +1) is true B. S(1) is true and S(k+1) is true whenever S (k) is true C. S(k+1) is true whenever S (k) is true D. S(k) is true
884	If the domain of sequence is finite set then the sequence is called	A. geometric sequence B. infinite sequence C. finite sequence D. arithmetic sequence
885	The order of the matrix [1 2 3] is	A. 1 x 1 B. 3 x 3 C. 3 x 1 D. 1 x 3
886	Question Image	A. 0 B. 1
887	Question Image	
888	The middle term of $[1/x-x]^{10}$ is	A. -152 B. -252 C. 371 D. -421
889	Question Image	A. 2^x B. 2^xln x C. 2^xln 2
890	$(1 + 2x)^4$= _____	A. 1 + 4x + 6x²+ 4x³+ x⁴ B. 1 - 4x + 6x²- 4x³+ x⁴ C. 1 - 8x + 24x²- 32x³+ 16x⁴ D. 1 + 8x+ 24x²+ 32x³+ 16x⁴
891	Question Image	D. none of these
892	the latus rectum of the parabola $x^3 = -4ay$ is:	A. x = a B. y = -a C. x = -a

		D. y = 0
893	Question Image	A. 0 B. -1 C. 1 D. -2
894	Question Image	B. a^xln a + c C. a^x+ c D. x a^x+ c
895	Domain of $\sin\theta$ is	A. Set of real numbers B. Set of complex numbers C. Set of natural numbers D. Set of even numbers
896	For every positive integers n 1+5+9+....+ (4n - 3) is	A. n(2n - 1) B. (2n - 1) C. n - 1 D. n
897	In quadratic equation, if the replacement of y with -y leaves the equation unchanged, then the graph is	A. Straight line B. Circle C. Hyperbola D. Symmetric w.r.t.0
898	Deductive logic in which every statement is regarded as true or false and there is no other possibility is called	A. deductive logic B. inductive logic C. Aristolian logic D. non-Aristolian logic
899	Probability of an impossible event is	A. 0 B. -1 C. 1 D. ∞
900	The mid point of the line segment joining the points (4,0) and (0,4) is	A. (4,4) B. (2,2) C. (-4,-4) D. (-2,-2)
901	The point _____ is in the solution of the inequality 2x - 3y < 4	A. (0, -2) B. (1, -3) C. (2, 2) D. (3, 0)
902	Question Image	B. x⁻²+ c D. not possible
903	Question Image	
904	$\cos^4\theta$ - $\sin^4\theta$=	A. cos4θ B. cos2θ C. -sinθ D. sin2θ
905	Question Image	
906	Question Image	A. The law of consines B. The law of sines C. The law of tangents D. None of these
907	Question Image	
908	If A is an event then which of the following is true	A. P(A)<0 B. 0≥P(A)≤1 C. P(A)>0 D. None
909	Question Image	
910	Question Image	
911	If the angle between two vectors u and v is 0 orπ, then the vectors u and v are:	A. Orthogonal B. Collinear C. Perpendicular D. None of these
		A. sec x tan x

912	Question Image	B. -cosec x cot x C. sec²x D. -sin x
913	A and B be two square matrices and if their inverse exist the (AB)-1 =	A. A-1 B-1 B. AB-1 C. A-1B D. B-1A-1
914	Range of 3 sin x is _____	A. [-3, 3] B. [-1, 1] C. R D. None of these
915	Question Image	
916	Question Image	A. A B. B C. U D. None of these
917	If p is false, ~ p is	A. true B. not true C. equal to p D. conjuction
918	Question Image	
919	Tan 180° = _____	A. -1 B. 0 C. 1 D. Undefined
920	Question Image	
921	Sum of two quantities is at least 20 is denoted by	A. x +y =20 B. x +y≥ 20 C. x +y≠ 20 D. x +y≤20
922	A complex number "1 + i" can also be expressed as"	A. 2(Cos60^o + i sin 30^o) B. Cos 60^o + i sin 60^o C. (Cos 60^o + i sin 60^o) D. Cos 30^o + i sin 30^o
923	Question Image	A. 1 B. 0 C. cx D. c
924	Onto function is also called	A. Binjective function B. Injective function C. Surjechive function D. None of these
925	The angle of depression of the point at a distance 70 meters from the foot of the tower from the top of the tower is 45□.The height of the tower is	A. 37m B. 97m C. 101m D. 70m
926	$w^{28}+ w^{38}=$ _____	A. 0 B. 1 C. w D. -1
927	Period of sin 3x is _____	
928	A diagonal matrix is always	A. Identity B. Triangular C. Scalar D. Non-singular
929	Question Image	
930	Question Image	A. 5 B. 10 C. 20 D. 30
931	sin $(2\pi-\theta)$	A. cosθ B. sinθ C. tanθ D. -sinθ
932	Question Image	
933	In one hour, the minute hand of a clock turns through	

934	If a, b, c are in A.P., then 3^a, 3^b, $3^c$are in	A. A.P. B. G.P. C. H.P. D. None of these
935	Function is a special type of	A. relation B. ordered pairs C. Cartesian product D. Set
936	The negative square root of 9 can be written as:	A. -√9 B. √9 C. √18 D. -√18
937	Question Image	A. 1 B. 2 C. 3
938	Question Image	A. 1 B. 0 C. -2 D. 3
939	The number of ways of arranging the letter AAAAA BBB CCC D EE F in a row when no two C's are together is	
940	Basic-principles of deductive logic were laid down by:	A. Euelid B. Leibniz C. Aristotle D. Newton
941	Ifθ= 60° then	A. sinθ= 1/2 B. tanθ= cot 30° C. θ=π/4 D. secθ= 4
942	cos(a +β)-cos(a-β) = _____;	A. 2cosa cosβ B. 2sina cosβ C. -25 in a cosβ D. -2sin a sinβ
943	Question Image	A. Associative law of multiplication B. Commutative law of addition C. Commutative law of multiplication D. Associative law of addition
944	No term of a geometric sequence can be	A. 0 B. 1 C. 2 D. 3
945	$2x^3$+ 3x + 9 is a _____	A. Polynomial of degree 3 B. Quadratic equation C. Cubic equation D. Polynomial of degree 2
946	Question Image	
947	Question Image	
948	Question Image	A. Rule of quotient of fraction B. Golden rule of fraction C. Rule for product of fraction D. Principle for equality of fraction
949	The sum of co-efficient in $(1+x-3x^2)^{4163}$is	A. 0 B. 1 C. -1 D. None
950	Question Image	A. 2, 3 B. 3, 3 C. 2, 6 D. 2, 4

951	Question Image	
952	Question Image	A. 3, -3, 11 B. 3, 3, 11 C. -3, 3, -11 D. -3, -3, 11
953	If 0 = R, thenthe additive inverse of a is	A. 1/9 B. ^{1/-9} C. a D. -a
954	Question Image	A. 0 B. 1 C. -2 D. 10
955	Three consecutive terms of a progression are 30, 24, 20. The next terms of the progression is	
956	Question Image	
957	If a=5j + 2j,b=2i -3j, then|a+2b|=	A. √21 B. √97 C. √39 D. None of these
958	Question Image	
959	Question Image	
960	In □ABC the mid points of AB and AC are (3,5) and -3,-1) respectively, then the length of the side BC is:	A. 15 B. 10 C. 30 D. 20
961	If the circle x^2+ y^2+ 2gx +2fy + c = 0 passes through the origin then	A. c = 0 B. c = -1 C. c = -2 D. c = 1
962	The liner equation ax + by = c is called _____ of the inequality ax +by > c.	A. Associated equation B. Non-associated equation C. disjoint equation D. Feasible equation
963	If distance of (a,b) from x-axis is 2 then	A. a = 2 B. b = 2 C. a = b D. b = 4
964	The area between the x-axis and the curve y = x^2 + 1 from x = 1 to 2 is:	A. 15/6 B. 15/4 C. 10/4 D. 10/3
965	The area of the circle centred at (1,2) and passing through (4,6) is	A. 30 πsq.units B. 5π sq.units C. 15π sq.units D. 25π sq.units
966	The equations of the line thro' the point (2, 3, -5) and equally inclined to the axis are	
967	The sum of indicated terms of a sequence is called	A. Arithmetic series B. Series C. Harmonic series D. None of these
968	Question Image	A. -76 B. 96723 C. 5721 D. -96096
969	Question Image	
970	The period of sin x/2 = Cos x/3 is	A. 2p B. 12p C. 13p D. 7p
971	The fifth term of (a+2x3)17 is	A. 4013 x3a13 B. 2208a13 x12 C. 223x7a18 D. 38080a13 x12
972	If the distance of any point on the curve from any of the two lines approaches zero then it is	A. Axis B. Directrices

972	any of the two lines approaches zero then it is called	B. Directrices C. Asymptotes D. None
973	The smallest positive root of the equation tan x - x = 0 lies on	
974	Which element is the additive inverse of (a, b) in Complex numbers?	A. (a, 0) B. (0, b) C. (a, b) D. (-a, -b)
975	For non-trival solution |A| is	A. non zero B. A = 0 C. |A| = 0 D. At = 0
976	Question Image	A. quadrant I B. quadrant II C. quadrant III D. quadrant IV
977	Question Image	
978	The value of x, and y, when $(x + iy)^2 = 5 + 4i$	A. X = 2, y = -1 B. X = -2, y=1 C. X = 2, y = -1 D. X = 2, y = 2
979	The law of cosines reduces to a2 +c2 =b2 for	A. α = 90° B. β = 90° C. γ = 90° D. α +β +γ =180°
980	Question Image	
981	Question Image	
982	If n(X) = 18, n(X∩Y) = 7, n(X∪ Y) = 40 then n(Y) =	A. 1 B. 12 C. 5 D. 29
983	If a = 2i +2j, b= 3i -j and c=4i +5j, the 3b -a-2c =	A. -i -15j B. i-15j C. i-3j D. None of these
984	Question Image	
985	Every set is an improper subset of	A. Empty set B. Equivalent set C. Itself D. Singleton set
986	The statements of the form "If p then q" are called	A. hypothesis B. conditional C. disjunction D. conjunction
987	The distance s of a particle in time t is given by $s = t^3 - 6t^2 - 4t - 8$. Its acceleration vanishes at t =	A. 1 B. 2 C. 3 D. 4
988	Question Image	
989	Question Image	
990	Question Image	A. false B. true C. not valid D. undefine
991	Question Image	A. 2x B. x/2 C. 2x³ D. x³/2
992	Which term of the A.P 5,8,11,24.....is 320	A. 104th B. 106th C. 105th D. 64th
993	Period of tan x is _____	
994	Question Image	

995	Which of the following is the definition of singleton	A. The objects in a set B. A set having no element C. A set having no subset D. None of these
996	tan h x = _____	
997	Archimedes approximate the function by horizontal function and the area under f by the sum of small	A. Parallelograms B. Squares C. Retangles D. Polygons
998	If A and B are two sets then any subset R of A x B is called	A. relation on A B. relation on B C. relation from A to B D. relation from B to A
999	The projections of a line segment on x, y, z axes are 12, 4, 3. The length and the direction cosines of the line segment are	
1000	Question Image	
1001	Question Image	
1002	The locus of the point of intersection of tangents to an ellipse at two points, sum of whose eccentric angles is constant is	A. A parabola B. A circle C. An ellipse D. A st. line
1003	A function whose range is just one element is called	A. One-one function B. Constant function C. Onto function D. Identity function
1004	QUQ, =	A. N B. R C. W D. Z
1005	Binomial expansion of an expression A gives 1-8 x + 24 x2-32 x3 -16 x4 the expansion A is given by	A. (1-2x)⁴ B. (1+2x)⁴ C. (1-4x)⁴ D. (1+4x)⁴
1006	A number H is said to be the H.M. between a and b if a, H, b are in	A. A.P. B. G. P. C. H. P. D. None of these
1007	The negation of a number	A. a relation B. a function C. unary operation D. binary operation
1008	A combination lock on a suitcase has 3 wheels each labeled with nine digits from 1 to 9. If an opening combination is a particular sequence of three digits with no repeats, the probability of a person guessing the right combination is	A. 1 / 500 B. 1 / 504 C. 1 / 252 D. 1 / 250
1009	Range of secθ is	A. Z - {x | -1 < x < 1} B. W - {x | -1 < x < 1} C. R - {x | -1 < x < 1} D. R
1010	Question Image	
1011	Question Image	
1012	Question Image	
1013	The set {1,-1, i, -i} form a group under	A. Addition B. Multiplication C. Subtraction D. None
1014	Question Image	A. -x B. Infinite set C. {-4, 4} D. None of these
1015	f(x) = C is	A. identity function B. constant function C. linear function D. quadratic function
		A. Continuity

1016	The behavior of trigonometric function is called	A. Continuity B. Discontinuity C. Periodicity D. Smoothness
1017	If for two events A and B , P(A∪B)=1,then events A and B are	A. Certain events B. Mutually exclusive C. Complementary events D. Independent
1018	Question Image	A. 1 B. 0 C. 3 D. -1
1019	In one hour, the hour hand of a clock turns through	
1020	Question Image	A. 1 B. 3 C. 2-i D. -1
1021	Through how many radians does the minute hand of a clock turn in one hour	
1022	Product of any n consecutive positive integers is divisible by	A. n B. √n C. n! D. None
1023	What is the circular measure of the angle between the hands of a watch at 4 O'clock	
1024	$4^{1+x}+4^{1-x}=10$ is called	A. Reciprocal equation B. Exponential equation C. Radical equation D. None of these
1025	The expansion of $(1-3x)^{-1}$ is valid if	A. | x | < 1 B. | x | < 3 C. | x | < 1/3 D. None of these
1026	Let A,B and C be any sets such that A∪B = A∪C and A∩ B = A∩ C then	A. A = B B. B = C C. A≠ C D. A ≠ B
1027	Question Image	A. 0 D. undefined
1028	If 3x + 4y +7 = 0 , then dy / dx =	A. -1/2 B. -4/3 C. 7/2 D. -3/4
1029	Differentiation of sin x w.r.t. cot x is:	A. -sin² x sec x B. -cos x sin² x C. -cos² x tan x D. -sin² x
1030	Question Image	
1031	A function from A to B is called on-to function, if its range is	A. A B. B C. A and B D. neither A nor B
1032	if a_9 =19,a9=31 are the 6th and 9th term of an A.P. and d=4 is the common difference, then 18th term of the sequence is	A. 65 B. 67 C. 71 D. 75
1033	A circle which touches one side of a triangle externally and the other two sides produced is called _____	A. In-circle B. Circum cirle C. Escribed circle D. None of these
1034	tan (π-θ) = _____	A. - sinθ B. - tanθ C. - cosθ D. - cot<span style="color: rgb(34, 34, 34); font-family: "Times New

		Roman"; font-size: 24px; text-align: center; background-color: rgb(255, 255, 224);">θ
1035	If $2x^{1/3}+ 2x^{-1/3}= 5$, then x is equal to	A. 1 or -1 B. 2 or 1/2 C. 8 or 1/8 D. 4 or 1/4
1036	$i^3=$	A. -1 B. i C. -i D. 1
1037	Question Image	B. 1 D. -1
1038	If for the matrix A, $A^5= I$, then $A^{-1}=$	A. A² B. A³ C. A D. None of above
1039	There are 16 point in a plane, in which 6 are collinear. how many lines can be drawn by joining these points?	A. 10 B. 66 C. 71 D. 106
1040	Domain of tan x is _____	
1041	Question Image	A. injuctive as well as surjective B. both onto and into C. one - one and into D. only (1 - 1)
1042	The graph of a linear function is	A. a circle B. triangle C. a straight line D. none of these
1043	The quadrilateral with the vertices (-3,-2), (2,-1), (3,4) and (-2,3) is a:	A. Square B. Rectangle C. rhombus D. parallelogram
1044	Question Image	A. n! B. 0! C. 1 D. None of these
1045	Question Image	
1046	If e,e′ be the eccentricities of two conics S=0 and S′ =0 and if e2 +e′2 =3 then both S and S′ can be	A. Hyperbola B. Parabolas C. Ellipses D. None of these
1047	The coefficient of x^{10} in the expansion $(x^3+3/x^2)^{10}$ is	A. 1700 B. 17023 C. 17027 D. 17010
1048	Question Image	A. a sin(ax + b) + c B. - a sin(ax + b) + c
1049	How many arrangements of the letters of the word MI SSI PPI, taken all together can be made?	
1050	Which shape of the following objects are approximately parabolic ares?	A. Light reflectors B. Force C. Weight of the pendul D. None of these
1051	The multiplicative inverse of 1 - 2i is	
1052	$\sin^{-1} x =$	A. tan⁻¹ x B. Cosec⁻¹ x C. Cosec x D. cosec⁻¹(1/x)
1053	The value of x which is unchanged by the mapping in the function defined by f ; x□ x^2 + 5x -5 for x> 0 is	A. 1 B. 5 C. -5 D. -1
1054	tan(2π+θ) = _____;	A. tanθ B. -tanθ C. cotθ D. -cotθ

1055	Question Image	
1056	The roots of ax2 + bx + c = 0 are always unequal if	A. b2 - 4ac = 0 B. b2- 4ac ≠ 0 C. b2- 4ac > 0 D. b2- 4ac ≥ 0
1057	Question Image	
1058	Question Image	A. A positive integer B. A negative integer C. A natural number D. An irrational number
1059	Question Image	
1060	If $x^2 + y^2 = 1$, then dy/dx	A. y/x B. -x/y C. 1/x D. None of these
1061	If|a| =|b|=|a + b|=1, then|a+ b| = 5, then|a-b| =	A. 4 B. 6 C. 5 D. 3
1062	Question Image	
1063	A chimney is such that on walking towards it 50 m in a horizontal line through its base the angular elevation of its top changes from 30° to 45°. The height of the chimney is	
1064	2^{2x}-3+2 $^{x+1}$+32 = 0 is gives value of x	A. (3,4) B. (8,4) C. (2,3) D. (5,9)
1065	The number of tangents to the circle x2+ y2 -8x -6y +9 =0 which pass through the point (3,-2) is	A. 2 B. 1 C. 0 D. None of these
1066	Question Image	A. 1760 B. -193 C. 223 D. none of these
1067	If a, b, c are in AP., a, b, c are in G.P. then A, m^2b, c are in	A. A.P. B. G.P. C. H.P. D. None of these
1068	Every real number is	A. a positive integer B. a rational number C. a negative integer D. a complex number
1069	Question Image	A. 0 B. 1 C. 2 D. 4
1070	Question Image	
1071	The distance of the point (2.3) from x-axis is	A. 2 B. 3 C. 5
1072	Question Image	A. 0 B. 1
1073	The vertex of the cone is also called	A. nappes B. axis C. rulings D. apex
1074	The synthetic division method is only used to divide a polynomial by	A. quadratic equation B. binomial C. linear equation D. monomial
1075	The set of positive integers, 0 and negative integers is known as the set of	A. Natural numbers B. Rational numbers C. All integers D. Irrational numbers

1076	Domain of 1+cot2θ=csc2θ is	A. [0,π] B. R-{x/x=nπ,n∈ z} C. (-∞,+∞) D. [-1,1]
1077	Question Image	A. a cos(ax + b) + c B. - a cos(ax + b) + c
1078	Question Image	
1079	There are two middle terms in the expansion of (a+x)n if n is	A. Even +ve integer B. +ve integer C. Odd +ve integer D. All
1080	The conic is a parabola if	A. e < 1 B. e > 1 C. e = 1 D. None of these
1081	The range of the function f : x→ y is defined by	A. {x| y = f (x) ∀x∈ X ∧y∈y} B. {(x,y) |y = f (x)∀x∈ X} C. {y|y = f (x) ∀x∈ X ∧y∈y} D. Y
1082	In quadratic equation $y=ax^3+bx+c$, if b and c are both zero then the graph is	A. Symmetric w.r.t.y-axis B. Symmetric w.r.t.x-axis C. Straight Line D. Circle
1083	The additive inverse of 0 is	A. 1 B. -1 C. 0 D. Does not exist
1084	Question Image	
1085	If $a(p+q)^2+bpq+c=0$ and $a(p+r)^2+2bpr+c=0$, then qr equals	A. p²+ c/a B. p²+ a/c C. p²+ c/a D. p²- c/a
1086	The central angle of an arc of a circle whose length is equal to the radius of the circle is called the	A. degree B. radian C. minute D. second
1087	The set (Q, .)	A. Forms a group B. Does not form a group C. Contains no additive identity D. Contains no additive inverse
1088	The first three terms in the expansion of $(1-x)^{-3}$ are	A. 1 + 3x + 6x² B. 1 - 3x + 6x² C. -3 - 3x - 6x² D. 1 - 3x - 6x²
1089	If$\pi \le x \le 2\pi$, then cos-1 (cos x)=	A. cos x B. -x C. 1/x D. -x
1090	Question Image	A. 5 B. 15 C. 10 D. 20
1091	The centre fo the circle $x^2+y^2+12x-10=0$ is	A. (12, -10) B. (6, -5) C. (-12, 10) D. (-6, 5)
1092	If one root of the equation $x^2-3x+a=0$ is 2 then a = _____	A. 0 B. 1 C. 2 D. 3
1093	The domain of the principal tan function is	
1094	Question Image	
1095	Through how many radians does the hour hand of a clock turn in one hour	
1096	The exponent of x in 10th term in the expansion of (a+x)n	A. 10 B. 12 C. 11 D. 9

1097	The equation of the line perpendicular to x-axis and passing through (-5,3) is	A. y -3 =0 B. x+ 3 =0 C. y- 3 =∞ D. x +5 =0
1098	The set of the first elements of the ordered pairs forming a relation is called its	A. Function on B B. Range C. Domain D. A into B
1099	We often consult doctors or lawyers on the basis of their good	A. personality B. behaviour C. reputation D. good dealing
1100	The series obtained by adding the terms of an arithmetic sequence is called the	A. Infinite series B. Harmonic series C. Geometric series D. Arithmetic series
1101	$\tan^{-1}(1/4) + \tan^{-1}(2/9)$ is equal to	A. 1/2 cos⁻¹(3/5) B. 1/2 sin⁻¹(3/5) C. 1/2 tan⁻¹(3/5) D. tan⁻¹1/2
1102	In the expansion of (x+y)n the coefficient of 5th and 12th terms are equal then n=	A. 12 B. n=14 C. 17 D. n=15
1103	Question Image	
1104	If Sn is a definite number as n → ∞,then the geometric series is	A. Convergent B. Divergent C. Oscillatroy D. None of these
1105	Let the real valued function F and G be defined by f(x) = 2 x + 1 and g(x) = x2 -x . The expression fg (x) is given by?	A. 2^{x2} - x+1 B. 2^{x2} - 2x +1 C. 2^{x2} -x + 2 D. x² -x +1
1106	A man of height 6 ft observes the top of a tower and the foot of the tower at angles of 45° and 30° of elevation and depression respectively. The height of the tower is	
1107	Question Image	A. Orthogonal B. Involutary C. Idempotent D. Nilpotent
1108	Cos (cos4π/3)=	A. π/2 B. π/3 C. 2π/3 D. -π/3
1109	Question Image	A. 2x cos x2 B. 2sinxcosx C. - sin x2 D. 2x sin x2
1110	Question Image	
1111	sin(π/2+θ) = _____;	A. sinθ B. cosθ C. -sinθ D. -cosθ
1112	Question Image	A. Always negative B. Zero C. Always positive D. Infinity
1113	Question Image	
1114	A bag contains 7 whit, 5 black and 4 rd balls. If two balls are drawn at random from the bag, the probability that they are not of the same color is	A. 73 / 120 B. 83 / 120 C. 67 / 120 D. 43 / 120
1115	The harmonic mean between a and b is	
1116	Question Image	
	How many necklaces can be made from 6	A. 120 B. 60

1117	How many necklaces can be made from 6 beads of different colours?	B. 60 C. 24 D. 15
1118	The corner point of the boundary lines, x- 2x x+2y=10 is:	A. (8,1) B. (1,8) C. (6,10) D. (3,5)
1119	I is not	A. Real number B. Natural number C. Prime Number D. Whole Number
1120	Question Image	
1121	If l=1.5 cm and r=2.5 cm, then 0=	A. .3 radians B. .20 radians C. .5 radians D. .6 radians
1122	f(x) = $x^3$is:	A. an odd function B. an even function C. an implicit function D. a quadratic funtion
1123	Domain of 2 cos x is _____	A. [-2, 2] B. R C. Negative real numbers D. None of these
1124	Question Image	
1125	The equation x^2 + y^2 +2g +2fy + c =0 represents a circle whose centre is :	A. (g,f) B. (-g,-f) C. (2g ,2f) D. (-2f ,-2g)
1126	Question Image	
1127	What is the period of 5 cot x=?	A. π B. -π C. π/2 D. 2π
1128	If the cutting plane is parallel to the axis of the cone and intersects both of its nappes, then the curve of intersection is	A. an ellipse B. a circle C. a parabola D. a hyperbola
1129	The 60th part of one minute is called	A. Degree B. Second C. Radiam D. None of these
1130	The last term of (1+2x)-2	A. (-1)-2 (2x)-2 B. (-1)-4(-2x)-2 C. (-1)-3(2x)-3 D. Does not exist
1131	if x∈ D$_f$ and $f^{1(x)}$ exists, then $_f$ is said to be	A. zero at x B. Differentiable at x C. Continuous at x D. None of these
1132	If x = at^2 and y = 2at then dy/dx =	A. 2a/y B. y/2a C. -a/2y D. -2y/a
1133	For any positive integer n	A. ABn = Bn A ⇔ AB = BA B. ABn = Bn A⇔ A,B are square matrices and AB = BA C. ABn = BnA⇔ A + B D. ABn = BnA ⇔ A and B are square matries
1134	Every relation, which can be represented by a linear equation in two variables, represents a	A. Relation B. Cartesian product C. Function D. Graph
1135	The roots of px2 - (p-q)x-q=0 are	A. equal B. Irrational C. Rational D. Imaginary
1136	Question Image	
		A. tan² (ax + b) B. 1/a tan² (ax + b)

1137	∫Sec^2 (ax + b) dx is equal to:	B. 1/a tan² (ax + b) C. 1/atan (ax +b) D. tan (ax + b)
1138	Question Image	
1139	In R the number of identity element w.r.t '+' is	A. One B. Two C. Three D. Four
1140	Question Image	A. -2x B. x⁻³ D. -2x³
1141	Form a group of 5 men and 3 women, a committee of 4 persons is to be selected randomly. The probability that there is a majority of men is	A. 1/4 B. 1/3 C. 1/2 D. 1/6
1142	Question Image	
1143	The derivative of 1/x^m is:	A. x^{m+1}/ m B. m(x)^{m-1} C. (m-1) x^{-m} D. m/x^{m+1}
1144	The two different parts of the hyperbola are called its	A. Vertices B. Directrices C. Nappes D. Branches
1145	if A = (x/x€ Q^ 0 < x < 1}, the A is	A. Infinite set B. Finite set C. Set of rational numbers D. Set of real numbers
1146	If n is any positive integer then n! > 2^{n-1}for	
1147	The graph of a constant line is	A. vertical line B. parabola C. circle D. horizontal line
1148	Question Image	A. -1 B. 0 C. 1 D. undefined
1149	If the sum of even coefficients in the expansion of (1+x)n is 128 then	A. n=7 B. n=9 C. n=8 D. None
1150	If the intersecting plane is parallel to a generator of the cone, but intersects its one nappe only, the curve of intersection is	A. a circle B. an ellipse C. a parabola D. a hyperbola
1151	The are of sector of a circular region of radius r is	A. 2π r B. π r² C. 1/2π r² D. 1/2 r²0
1152	If z_1 =√-36 ,z_2 =√-25,z3 =√-16 then	A. 15 B. 15i C. -15i D. -15
1153	The real numbers which satisfy an inequality form its	A. solution B. coefficient C. domain D. range
1154	The fifteenth term of (3-a)^{15} is	A. -17a¹² B. -945a¹³ C. -941a¹³ D. -515a¹²
1155	The symbol of irrational is	A. W B. N C. Q D. Q'
1156	if f(x) = x^3 -3x^2 +5x -1, then f(-√2)=	A. 7+7√2 B. 3+3√2 C. -7-7√2 D. -3-3√2

1157	Question Image	
1158	The equation $ax^2+ 2hxy + by^2 +2gx + 2fy + c =0$ represents an ellipse if	
1159	Question Image	
1160	Which is in the solution set of 4x - 3y < 2	A. (3, 0) B. (4, 1) C. (1, 3) D. None
1161	The lines that form the cone are called its:	A. Generation B. Circular cone C. nappes D. conics
1162	The area of the rhombus whose vertices are A(0,0),B(2,1),C(3,3),D(1,2) is	A. 36 square units B. 3 square units C. 6 square units D. 18 square units
1163	The generators of a cone are also called	A. rulings B. apex C. nappes D. ellipse
1164	∫sin(ax+b) dx is equal to:	A. 1/2a cos (ax + b) B. -1/a cos (ax +b) C. 1/a cos (ax +b) D. 1/a ln (ax + b)
1165	Question Image	A. π/ 4 B. π/ 6 C. π/ 3 D. 2π/ 3
1166	Every irrational number is	A. A real number B. A prime number C. A natural number D. An integer
1167	Question Image	
1168	If the sum of co-efficient in the expansion of $(a+b)^n$is 4096, then the greatest co-efficient in the expansion is	A. 1594 B. 792 C. 924 D. 2924
1169	Question Image	
1170	Question Image	A. -2x³ B. 2x⁻³ C. -2x⁻³ D. 2x³
1171	Which of the following us a scalar	A. displacement B. velocity C. acceleration D. density
1172	The points (5, 0, 2), (2, -6, 0), (4, -9, 6) and (7, -3, 8) are vertices of a	A. Square B. Rhombus C. Rectangle D. Parallelogram
1173	The probability to get an odd number in a dice thrown once is	A. 1/2 B. 1/6 C. 1/3 D. 2
1174	Question Image	A. 1 B. 2 C. 0 D. None of these
1175	Question Image	A. -228 B. -1/288 C. -1/220

		C. -1/220 D. -1/177
1176	Question Image	A. 0 B. 1 C. -1 D. None of these
1177	Question Image	
1178	(7, 9) + (3, -5) =	A. (4, 4) B. (10, 4) C. (9, -5) D. (7, 3)
1179	Question Image	
1180	The point (x_1, y_1) lies outside the circle $x^2+ y^2+ 2gx + 2fy + c =0$ if	
1181	The square matrix A is skew-symmetric when At=	A. -B B. -C C. -A D. -D
1182	Let $S_n$denote the sum of the first n terms of an A.P. If $S_{2n}= 3 S_n$: $S_n$is equal to	A. 4 B. 6 C. 8 D. 10
1183	Question Image	
1184	For different values of k equation 4x+5y =k represents	A. Parallel lines B. Lines parallel to x -axis C. Perpendicular lines D. Lines parallel to y -axis
1185	The slope of the normal at (5 cos, 0, 5 sin 0) to the circle. $x^2+y^2 = 25$ is:	A. tan□ B. cos□ /sin□ C. -cot□ D. - tan□
1186	(A∪B)∪C= ----------	A. A∩B(B∪C) B. A∪(B∪C) C. A∪(B∩C) D. None of these
1187	A square is inscribed in the circle $x^2+ y^2- 2x + 4y + 3 =0$. Its sides are parallel to the co-ordinate axes. Then one vertex of the square is	
1188	Question Image	A. -1 B. 0 C. 2 D. 1
1189	The point _____ is in the solution of the inequality 4x - 3y < 2	A. (0,1) B. (2,1) C. (2,2) D. (3,3)
1190	If $(1+x-2x^3)^6= 1+a_1x + a_2x^2+ a_3x^3+$ ..... the the value of $a_2+ a_4+ a_6+$ .....+a_{12}will be	A. 32 B. 31 C. 64 D. 1024
1191	Question Image	A. I quadrant B. II quadrant C. III quadrant D. IV quadrant
1192	$f(x) = 3x^4 -2x^2 + 7$ is:	A. an even function B. an odd function C. an even and implicit function D. neither even nor a odd
1193	Question Image	A. direction ratios B. direction cosines C. direction angles D. none of these
1194	The area of the circle centred at (1, 2) and passing through (4, 6) is	
1195	The points (-1,3), (3,0) are the vertices of:	A. Right-angled triangle B. Isosceles triangle C. Equilateral triangle D.

		D. square
1196	The ellipse and hyperbola are called	A. Concentric conics B. Central conics C. Both a b D. None
1197	Arithmetic mean between a and b is	
1198	Question Image	
1199	The square of the distance between two points $P(x_1, y_1)$ and $Q(x_2, y_2)$ is	
1200	Question Image	A. [0, 0, 0] B. [1, 0, 0] C. [0, 1, 0] D. [0, 0, 1]
1201	The quadratic equation 8 sec2θ - 6 secθ +1 =0 has	A. Infinitely many roots B. Exactly two roots C. Exactly four roots D. No roots
1202	The quadratic formula is	
1203	The exact degree value of the function sin-1(-√3/2) is	A. 70^o B. 50^o C. 90^o D. 60^o
1204	The sum of the odd coefficients in the expansion of $(a + x)^4$is	A. 14 B. 12 C. 8 D. 4
1205	The order axioms are satisfied by set of	A. C B. C and R C. R D. None of these
1206	The 8th term of $(1+2x)^{-1/2}$is	A. -221/16 x⁷ B. -225/18 x⁷ C. -407/9 x³ D. -429/16 x⁷
1207	Let A and B be two non-empty sets, then any subset of the cartesian product AxB is called a	A. function B. domain C. range D. binary relation
1208	The function denoted by 1/f called the	A. Reciprocal function B. Inverse function C. Constant function D. Reverse function
1209	What is the axis of the parabola $y^2 = 4ax$?	A. x = 0 B. y = 0 C. x = a D. y = 0
1210	Axes remain parallel to the old axes, in:	A. Translating of axes B. rotation of axes C. Translation and rotation of axes D. None of these
1211	Such fraction which can not be written in the form ofp⁄q where p,q and q≠ 0,such fractions are called.	A. Fractinal numbers B. Rational Numbers C. Even Numbers D. Whole Numbers
1212	Period of Tangent function is	A. 0° B. -π C. π D. 2π
1213	Question Image	
1214	Parametric equation of circle : $x^2+y^2+r^2$, are	A. r1 = x cos□ r² = y sin□ B. x = r cos□ y = r sin□ C. x = r sin□1 y = r sin□2 D. x = r₁ cos□ y = r_{2 sin□}

1215	Question Image	A. 0 B. -1 C. 1 D. 2
1216	For all points (x,y) on x-axis	A. x is positive B. x is negative C. y = 0 D. y is negative
1217	If A, G, H are the arithmetic, geometric and harmonic means between a and b respectively then A, G, H are in	A. A. P. B. G. P. C. H. P. D. None of these
1218	Question Image	A. 1 B. -1 C. -1/2 D. 1/2
1219	The constant distance of all points of the circle from its centre is called the	A. Radius of the circle B. Secant of the circle C. Chord of the circle D. Diameter of the circle
1220	Which of the following is a factor of $x^3 - 3x^2 + 2x - 6$	A. x + 2 B. x + 3 C. x - 3 D. x - 4
1221	Question Image	A. 120 B. 5 C. 4 D. 6
1222	Question Image	A. 5 B. 20 C. 9 D. 4
1223	The set of integer is	A. Finite group B. A group w.r.t addition C. A group w.r.t multiplication D. Not a group
1224	The set of first elements of the ordered pairs forming the relation is called is	A. Domain B. Range C. Ordered paris D. Relation
1225	56^o=.....radians	A. 1.25 B. 2.56 C. 95 D. 0.98
1226	Question Image	
1227	Question Image	A. I quadrant B. II quadrant C. III quadrant D. IV quadrant
1228	If $\underline{u} = 2\underline{i} + p\underline{i} + 5\underline{k}$ and $\underline{v} = 3\underline{i} + \underline{i} + p\underline{k}$ are perpendicular , then p=	A. 1 B. 2 C. -1 D. -3
1229	Question Image	A. range of f B. domain of f C. both (a) and (b) D. none of these
1230	The additive inverse of a matrix A is	D. None of these
1231	The matrix A is Hermitian when (A)' =	A. A B. -A C. A D. A'
1232	The centre of the circle x2+y2 -2fx-2gy+x=0 is	A. (-g,-f) B. (g,f) C. (f,g) D. (-f,-g)
1233	The point of contact of the circles $x^2 + y^2 - 6x - 6y+10 = 0$ and $x^2 + y^2 = 2$ is	A. (-3 ,2) B. (1 , 3) C. (-2 , -1)

		D. None of these
1234	Question Image	
1235	Question Image	
1236	If n is any positive integer then $2^n > 2(n + 1)$ is true for all	
1237	The coefficient of x^{18} in $(ax^4-bx)^9$ after expansion is	A. 84a³ b⁶ B. 22a³b⁶ C. 27a⁴b⁵ D. 28a³b⁶
1238	The degree of differential equation is the power of the	A. Lowest order derivative B. Highest order derivative C. Integral D. All are correct
1239	Question Image	
1240	Unit vector in the positive direction of x-axis is	
1241	For the equation $\|x^2\| + \|x\| -6 =0$, the roots are	A. One and only one real number B. Real with sum one C. Real with sum zero D. Real with product zero
1242	If a 1-1 correspondence can be established b/w two sets A and B, then they are called	A. Equal sets B. Equivalent sets C. Over lapping sets D. None of these
1243	∀x,y,z ∈ R and z 0,then	A. x > y ⇒ xz > yz B. x<y ⇒ xz < yz C. x < y ⇒ xz > yz D. None of these
1244	Derivative of strictly increasing function is always	A. Zero B. Positive C. Negative D. Both (A) and (B)
1245	If a,b,c are three non-coplanar vector then [a +b,b +c,c +a] = _____	A. [a.b.c] B. 2[a,b,c] C. [abc]-2 D. 2[abc]2
1246	Any two propositions which is combined by the word "and" and form a compound proposition is called	A. conditional of the original proposition B. consequent of the original proposition C. disjunction of the original proposition D. conjunction of the original propositoin
1247	Question Image	A. A B. B C. A' D. None of these
1248	Question Image	A. 1 B. 2 C. -1 D. 0
1249	The set {1, -1, 1, -1}, form a group under	A. Addition B. Multiplication C. Subtraction D. None
1250	∀ a ε R ∃ o ε R such that a + v = 0 + a = a is property of	A. Commutative law of addition B. Associative law of addition C. Additive identity D. Additive inverse
1251	10 is a even number or 0 is a natural number, then truth value of this disjunction is	A. false B. true C. not discussed D. negation of first
1252	If the domain of the function f: x□ $2x^3$+ 1 is {-1,2,3}, the range of the function is	A. {3,2,5} B. {1,3,9} C. {-1,-2,-3} D. {3,9,19}
1253	∛8.6 is approximately equal to	A. 2.488 B. 2.48 C. 2.0488 D. 2.05

1254	If y = 1/x^2 then dy/dx equals:	A. -2x B. x⁻³ C. -2/x³ D. -2x³
1255	Question Image	A. 56 B. 7 C. 8 D. 8/7
1256	The set {-1, 1} is closed under the binary operation of	A. Addition B. Multiplication C. Subtraction D. Division
1257	If range of a function f is B, then the function is	A. surjective B. injuctive C. bijective D. into
1258	Question Image	
1259	Question Image	A. 1 B. 2 C. 3/2 D. 5/2
1260	Question Image	
1261	The multiplicative inverse of 0 is	A. 1 B. -1 C. 0 D. Does not exist
1262	The next term of the sequence 1, 2, 4, 7, 11, ... is.	A. 15 B. 16 C. 17 D. 18
1263	Question Image	A. Trichotomy property B. Additive property of inequality C. Transitive property D. Multiplicative property
1264	Question Image	A. -sinθ B. cosθ C. sinθ D. -cosθ
1265	If 2 and 2 are x and y components of vector then its angle with x-axis is	A. 30° B. 45° C. 60° D. 90°
1266	Question Image	
1267	$a.a^{-1} = a^{-1}.a = 1$ is a	A. Commutative law of multiplication B. Multiplication identity C. Associative law of multiplication D. Multiplication inverse
1268	A sequence is a functions whose domain is a subset of the set of	A. Natural numbers B. Real numbers C. Whole numbers D. Rational numbers
1269	If c is a constant number and if f is the function defined by the equation f(x) =c for all values of x, then f is differentiable at every x and f is defined by the equation f(x)	A. f B. 1 C. C D. 0
1270	Question Image	A. 3 x 1 B. 1 x 3 C. 3 x 3 D. 1 x 1

1271	A box containing 10 mangoes out of which 4 are rotter. Two mangoes are taken together from the box. If one of them is found to be good, the probability that the other is also good is	A. 1 / 3 B. 8 / 15 C. 5 / 13 D. 5 / 9
1272	If P, Q, R be the A.M., G.M., H.M. respectively between any two rational numbers a and b, then P - Q is	
1273	If $3x^{2-6} - 9^{x+1} = 0$ then the valid values of are.	A. (4,2) B. (2,1) C. (0,1) D. (3,-3)
1274	An equation which hold good for all values of the variables is called	A. Identity B. fraction C. mixed form D. Partial equation
1275	Question Image	A. a = -1/2, b = -1 B. a = 1, b = 2 C. a = 2, b = 3 D. None of above
1276	Two sets A and B are said to be disjoint if	
1277	Question Image	A. 1, 1/2, 0 B. 1, 2, 1 C. 1, 2, 3 D. 1, 2, 0
1278	Number of ways of writing the letters of WORD taken all at a time is	A. 24 B. 4 C. 12 D. 6
1279	Question Image	A. 2 B. -3/2 C. 1 D. 0
1280	Question Image	
1281	Question Image	
1282	Union of the sets of rational and irrational numbers is called 6th set of	A. Natural numbers B. Real numbers C. Whole numbers D. Prime numbers
1283	Question Image	A. f(x) = x² B. f(x²) = x C. f(x) = x D. none of these
1284	The square root of 2i - 20i is	A. +-(5 - 2i) B. +-(5 + 2i) C. (5 - 2i) D. None of these
1285	Question Image	
1286	Derivative of a w.r.t x is	A. 0 B. 1 C. x D. x
1287	An infinite arithmetic series is always	A. Convergent B. Oscillatory C. Divergent D. None of these
1288	1 degree = _____	A. 0.00175 rad B. 0.175 rad C. 0.0175 rad D. 1.75 rad
1289	The points of intersection of the line y = 2x -3 and the circle $x^2 + y^2 - 3x = 2y - 3 = 0$ are:	A. two B. three C. less thean two D. not intersect
1290	The number of the diagonals of a 6 sided figure is	A. 15 B. 21 C. 9 D. 6

1291	If three unequal numbers p, q, r are in H.P. and their squares are in A.P., then the ration p : q : r is	
1292	Ifα,β are non-real roots of ax2 + bx +c =0 (a,b,c∈ Q),then	A. α = β B. αβ = 1 C. α = β D. α = 1
1293	The set (Z,+) forms a group	A. Forms a group w.r.t addition B. Non commutative group w.r.t multiplication C. Forms a group w.r.t multiplication D. Doesn't form a group
1294	A bag contains 3 white, 4 black and 2 red balls. If 2 balls are drawn at random, then the probability that both the ball are white is	A. 1/18 B. 1/12 C. 1/36 D. None of these
1295	The period of 2 cos x is	A. 30π B. 7π C. 5π D. 2π
1296	If | x | < 1, then the first two terms of (1 - x)$^{1/2}$are	
1297	If a particle moves according to the law s = t^3-t^2, then its velocity at time t = 1.5 is	A. 9/2 B. 15/4 C. 5 D. None
1298	Question Image	C. 2x D. 2
1299	Question Image	
1300	Question Image	
1301	(0,1) is in the solution of the inequality	A. 3x + 2y > 8 B. 2x - 3y < 4 C. 2x + 3y > 5 D. x -2y < -5
1302	The symbol∋ stand for	A. Such that B. There exist C. For all D. Belongs to
1303	A stationary point x is a relative exterma of y= f(x) is	A. f′′ (x) > 0 B. f′′ (x) < 0 C. f′′ (x) ≠ 0 D. f′′(x) = 0
1304	Water seeps out of a conical filter at eh constant rate of 5 cm/sec. the height of the cone of water in the filter is 15 cm. the height of the filter is 20 cm and radius of the base is 10 cm. the rate at which the height of the water decreases is	
1305	Three integers are chosen at random from the first 20 integers. Then probability that their product is even, is	A. 2 / 19 B. 3 / 29 C. 17 / 19 D. 4 / 19
1306	If the line 2x -y +k =0 is a diameter of the circle x2 +y2 +6x -6y +5 =0 then k is equal to	A. 12 B. 9 C. 6 D. 3
1307	A point of a solution region where two of its boundary lines intersect, is called	A. Boundary B. Inequality C. Half plane D. Vertex
1308	Question Image	B. 1 C. -1
1309	Question Image	A. A finite non-empty set B. Null set C. Both a and b D. None of these
1310	Question Image	A. A finite set B. An infinite set C. An empty set

		D. None of these
1311	In R, the additive inverse of a is	A. 0 B. 1 C. -a D. 1/a
1312	∫ x cos dx is equal to :	A. x cos x + sin x B. cos x + x sin x C. x cos x + x sin x D. x sin x + cos x
1313	A function whose domain is a subset of natural numbers is called _____	A. Identity function B. Sequence C. Onto function D. Series
1314	The set {-1,1} is closed under the binary operation of	A. Addition B. Multiplication C. Subtraction D. Division
1315	Write the first four terms of the sequence if $a_n = (-1)^n n^2$	A. -1, 4, -9, 16 B. 1, -4, 9, 16 C. 1, 4, 9, 16 D. None of these
1316	A second degree equation in which coefficients of x^2 and y^2 are equal and there is no product term xy represents	A. a parabola B. a circle C. an ellipse D. a pair of lines
1317	The logic in which every statement is regarded as true or false and no other possibility is called	A. Aristotelian login B. Inductive logic C. Non-Aristotelian logic D. None of these
1318	Question Image	
1319	Question Image	A. 3/8 B. 7/8 C. 1/8 D. None
1320	Which of the following statement is true	A. 16^{1/3}x 16^{1/6} = 4 B. 9^{1/3} x9^{1/6} =8^{11/8} C. 9^{1/3} x9^{1/6} = 9^{1/8} D. All of these
1321	Question Image	
1322	If the cutting plane is slightly tilted and cuts only one nappe of the cone, the intersection is	A. an ellipse B. a hyperbola C. a circle D. a parabola
1323	(ABC)' =	A. CBA' B. CBA C. C'B'A D. C'B'A'
1324	If you are looking someone on the ground from the top of a hill the angle formed is called angle of _____;	A. Elevation B. Depression C. Right angle D. None off these
1325	If n is any positive integer ,t hen 2+4+6+.....+2 n=	A. 2ⁿ-1 B. 2ⁿ+1 C. n²+1 D. n(n+1)
1326	The fifth term of the sequence $a_n = 2n + 3$ is _____	A. 13 B. -13 C. 8 D. 3
1327	Z is a group under	A. Subtraction B. Multiplication C. Addition D. None of these
1328	x = _____ is in the solution of $2x + 3 \geq 0$	A. 1 B. -2 C. -3 D. -4
1329	The sum of an infinite geometric series exist if	A. | r | < 1 B. | r | > 1

		C. r = 1 D. r = -1
1330	If the cutting plane is slightly tilted and cuts only one nappe of the cone, the resulting section is:	A. an ellipse B. Circle C. a hyperbola D. a parabola
1331	To study conics, Pappus used the method of	A. analytic geometry B. solid geometry C. Euclidean geometry D. none of these
1332	If in a square matrix a, two rows or two columns are interchanged the determinant of the resulting matrix is	A. |A| B. |1/|A| | C. A⁻¹ D. -|A|
1333	graph of sine function is bounded between lines	A. y± 1 = 0 B. x± 1 = 0 C. x± y - 0 D. None of these
1334	If the cone is cut by a plane perpendicular to the axis of the conec, then the section is a:	A. Circle B. ellipse C. hyperbola D. parabola
1335	e-radii are denoted by	A. η B. r2 C. r3 D. All of these
1336	sin 3a = _____;	A. 3sin a - 4sin3a B. 4sin a -3 sin3 a C. 3 cos3 a -cosa D. 4cos3 a - 3cos a
1337	What is the period of cos 6x =?	A. π/2 B. π/3 C. π/4 D. π
1338	The equation of the tangent at vertex to the parabola is y2 = -8(x -3)	A. y=0 B. x=3 C. x=1 D. x=5
1339	Question Image	A. 1 B. -1 C. 0 D. I
1340	Question Image	
1341	The number of values of x in the interval [0, 5π] satisfying the equation 3 $\sin^2 x$ - 7 sinx + 2 = 0 is	A. 0 B. 5 C. 6 D. 10
1342	The period $\sin^2\theta$is	A. π² B. π C. 2π D. π/2
1343	if Z1 = 1+i, Z2= 2+3i, then |Z2 -Z1| =	A. √3 i B. √7 C. -2-i D. √5
1344	Period of Cotangent function is	A. π B. -π C. 0 D. -2π
1345	Question Image	
1346	The sum of all 2 digit number is	A. 4750 B. 3776 C. 4895 D. 4905
1347	If two balls are drawn from a bag containing 3 white, 4 black and 5 red balls. Then the probability that the drawn balls are of different colours is	A. 1 / 66 B. 3 / 66 C. 19 / 66 D. 47 / 66
1348	Question Image	

1349	A relation a into B in which Domain is not equal to a, is called.	A. Into function B. on to function C. None of these D. Surjective
1350	In a class of 100 students, 60 drink tea, 50 drink coffee and 30 drink both. A student from his class is selected at takes at last one of 2 drinks is	A. 2 / 5 B. 3 / 5 C. 4 / 5 D. None of these
1351	The function f : x→ y defined as f (x) =α∀x∈ X,α∈ y is called	A. Constant function B. Polynomial function C. Identity function D. Linear function
1352	The sum of first n even number is	A. n2 B. n(n+1) C. n+1 D. n+2
1353	If P is a proposition then its negative is denoted by	
1354	Which element is the additive inverse of (a,b) in Complex numbers	A. (a,0) B. (0,b) C. (a,b) D. (-a,-b)
1355	If B ={x/x€ Z ^ - 3 < x < 6}, then n (B) =	A. 5 B. {-3,-2,-1,0,1,2,3,4,5,6} C. 8 D. 9
1356	Which of the following is not a solution of system of inequalities 2x- 3y ≤6,2x +y≥ 2,x +2y≤ 8, x≥ 0,y ≥ 0	A. (1,0) B. (0,4) C. (3,0) D. (8,0)
1357	Every prime number is also	A. Rational number B. Even number C. Irrational number D. Multiple of two numbers
1358	Roots of the equation x^2+ 7x + 12 = 0 are	A. {3, -4} B. {-3, 4} C. {3, 4} D. {-3, -4}
1359	Period of 2 cos x is _____	
1360	A function f from A to B can be written as	
1361	A - B = _____	
1362	(a,0) x (c,0) =	A. (0,ac) B. (ac,0) C. (0,0) D. (a,c)
1363	Question Image	
1364	2x + 3y > 4 is a linear inequality in	A. one variable B. two variables C. three variables D. none of these
1365	Which of the following is not a quadrantal angle	A. 90° B. 100° C. 180° D. 270°
1366	Geometrically, the modulus of a complex number represents its distance from the	A. Point (1, 0) B. Point (0, 1) C. Point (1, 1) D. Point (0, 0)
1367	A point of a solution regions where two of its boundary lines intersect, is called:	A. Vertex of the solution B. Feasible point C. Point of inequality D. Null point of the solution region
1368	Question Image	
1369	The set (Z, +) forms a group	A. Forms a group w.r.t addition B. Forms a group w.r.t multiplication C. Non commutative group w.r.t multiplication D. Doesn't form a group

1370	The value of 7π/9 in terms of degree is	A. 140^o B. 130^o C. 120^o D. 45^o
1371	Question Image	A. Closure law of addition B. Closure law of multiplication C. Commutative law of addition D. Commutative law of multiplication
1372	A matrix with a single column is called	A. Column matrix B. Row matrix C. Identity matrix D. Null matrix
1373	The fixed point from which all the points of a circle are equidistant is called the	A. chord of the circle B. centre of the circle C. diameter of the circle D. radius of the circle
1374	The arbitrary constants involving in the solution can be determined by the given conditions. Such conditions are called	A. Boundaries B. Variable separable C. Initial values D. None
1375	ab > 0 and a > 0 then	A. a > b B. a < b C. a = b D. None
1376	A series consisting of an unlimited number of terms is termed as an	A. Finite sequence B. Infinite sequence C. ^{Infinite series} D. geometric sequence
1377	To draw conclusions front premises believed to be true, this way of reasoning is called	A. deduction B. induction C. implication D. disjunction
1378	One minute is denoted by	A. 1⁰ B. 1' C. 1" D. None of these
1379	The eccentricity of ellipse becomes zero, then it takes the form of:	A. a parabols B. a straight line C. a circle D. None of these
1380	The periods of the function f(x) = x[x] is	A. 1 B. 2 C. Non periodic D. None of these
1381	Sine rule for a triangle states that	A. a/sin A = b/sin B = c/sin C B. sin A/a = sin B/b = sin C/c C. a/sin A + b/sin B + c/sin C D. 2a/sin A = 2b/sin B = 2c/sin C
1382	Question Image	
1383	If the matrices A and B have the order 1 x 10 and 10 x 1 then order of AB is	A. 1 x 1 B. 1 x 10 C. 10 x 10 D. 10 x 1
1384	Question Image	A. (-1, 2) B. (-1, 1) C. (1, 2) D. {-1}
1385	Question Image	A. 2 B. 4 C. 3 D. 16
1386	E-radius corresponding to < A is	
1387	Question Image	A. Imaginary B. Rational C. Irrational D. Real numbers
1388	1/2,1/3,1/4,1/5.....is	A. a geometric sec B. an arithmetic series C. finite sequence

		D. an infinite sequece
1389	Question Image	A. 3K B. K2 C. K3 D. K
1390	The angle between lines xy =0 is	A. 45° B. 60° C. 90° D. 180°
1391	If 4 > b or a < b than a = b is a	A. Additive property B. Transitive property C. Trichotomy property of inequality D. None of above
1392	If the vector 2i + 4j - 7k and 2i + 6j + xk are perpendicular then x = ?	A. 0 B. 2 C. 4 D. 7
1393	The longer side of a parallelogram is 10 cm and the shorter is 6 cm. If the longer diagonal makes an angles 30° with the longer side, the length of the longer diagonal is	
1394	In R the left cancellation property w.r.t addition is	
1395	Question Image	
1396	Question Image	A. 0 B. 1 C. -A D. -1
1397	Question Image	
1398	Which one is a pair of allied angles	A. (180° -θ) B. (180° -θ,180° +θ) C. (180° +θ) D. None of these
1399	5 unbiased coins coins are tossed simultaneously. The probability of getting at least one head is	A. 1 / 32 B. 31 / 32 C. 1 / 16 D. None of these
1400	The unit vector along z-axis is	D. none of these
1401	The real number system contains.	A. Positive Numbers B. Negative numbers C. Zero D. (option a, b and c)
1402	Question Image	A. (a - c)²= b²- c² B. (a - c)²= b²+ c² C. (a + c)²= b²- c² D. (a + c)²= b²+ c²
1403	Question Image	
1404	Corner point of the system x - y≤ 2,x + y≤ 4,2x - y≤ 6,x≥ 0,y≥ 0	A. (1,4) B. (4,2) C. (3,1) D. (4,1)
1405	The surface generated by lines, consists of two parts, called:	A. vertex B. apex C. nappes D. axis
1406	f(x) = $2x^2$+ 3x + 5 is a	A. trigonometric function B. algebraic function C. exponential function D. logarithmic function
1407	Question Image	A. Associative property of addition B. Commutative property of addition C. Distributive property

		C. Distributive property D. Additive identity
1408	Question Image	A. 2 B. 1 C. 5 D. 0
1409	Question Image	
1410	Question Image	
1411	The numbers used in rows or columns are said to be entries or	A. Columns B. Rows C. Element D. Determinants E. Matrix
1412	A function of the form p(x)/Q(x) is called:	A. Rational function B. Logarithmic function C. Exponential function D. Hyperbolic function
1413	Name the property used in 1000 x 1 = 1000	A. additive inverse B. multiplicative inverse C. additive identity D. multiplicative identity
1414	Question Image	
1415	sin(180° -θ)=	A. cosθ B. -cosθ C. Tanθ D. Sinθ
1416	Question Image	A. 8 C. 4 D. 64
1417	The corner point of the boundary lines, x-2y 2x + y = 2 is:	A. (2,6) B. (6,2) C. (-2,2) D. (2,-2)
1418	If the roots of 3x2+kx + 12 = 0 are equal then k = _____	
1419	Every whole number is	A. A real number B. An irrational number C. A prime number D. A negative integer
1420	What is range of the function g (x) =|x-3|?	A. [0 ,∞) B. (0 ,∞) C. (-∞ ,3] D. [0,∞)
1421	x^2+ x - 6 = 0 is	A. An equation B. An identity C. A polynomial D. None of these
1422	A conjunction is considered to be true only if both its components are	A. False B. Equivalent C. Equal D. True
1423	(x3-1/x)12	A. 295 B. 495 C. 395 D. 722
1424	Question Image	A. 2 B. 5 C. 7 D. None of these
1425	Question Image	A. An ellipse B. A parabola C. A circle D. A hyperbola

		D. A hyperbola
1426	The set {{a,b}} is	A. Infinite set B. Singleton set C. Two points set D. None
1427	ax + by < c is linear inequality in	A. four variables B. three variables C. two variables D. one variable
1428	Question Image	
1429	Let A,B, and C be any sets such that A∪B = A∪C and A∩B = A∩C then	A. A≠ C B. B = C C. A = B D. A≠ B
1430	Question Image	
1431	Tan 3x tan 2x-tan x is equal to	A. Tan x tan 2x tan 3x B. -tan x tan 2x tan 3x C. Tan x tan 2x - tan - tan x tan 3x - tan 2x tan 3x D. None of these
1432	The value of the expression 3 cosθ+ 4 sinθθlie between	A. -7 and 7 B. -25 and 25 C. -1 and 1 D. -5 and 5
1433	A statement which is either true or false is called	A. Induction B. Deduction C. Propositicon D. Logic
1434	Question Image	A. 0 B. 1 C. -1 D. None of these
1435	If the roots of $ax^2+ bx + c =0$ are equal in magnitude but opposite in sign, then	A. a = 0 B. b = 0 C. c = 0 D. None of these
1436	The two lines x + y = 0 and 2x - y + 3 = 0 intersect at the point:	A. (-1,1) B. (2,3) C. (1,3) D. (-1,2)
1437	Identity element, if it exists, is	A. inverse B. unique C. commutative D. associative
1438	Additive inverse of - a - b is	A. a B. -a + b C. a - b D. a + b
1439	Question Image	
1440	The period of cos(7x-5) is	A. π/7 B. 7π/2 C. π/2 D. 2π/7
1441	Question Image	
1442	Matrices A = [aij] 2 x 3 and B = [bij] 3 x 2 are suitable for	A. BA B. A2 C. AB D. B2
1443	The element range of sequence are called	A. Series B. progression C. Members D. Terms
1444	The vertices of the ellipse $x^2+ 4y^2= 16$ are	
1445	The set X is	A. Proper Subset of X B. Not A subset of X C. Improper Subset of X D. None of these
		A. a = 4, b = 1

1446	Question Image	B. a = 1, b = -4 C. a = 0, b = 4 D. a = 2, b = 4
1447	Question Image	
1448	Which of the following diagrams represent bijective function?	
1449	If $x^4 - 10x^2 - 2x + 4$ is divided by x + 3, then the reminder is	A. 1 B. 0 C. 4 D. None of these
1450	If $b^2 - 4ac = 0$ then the roots of the equation are	A. Real and distinct B. Real and equal C. Imaginary D. None of these
1451	Let A and B be two sets. If every element of A is also an element of B then	
1452	Question Image	
1453	The parametric equation of a curve are $x = t^2$, $y = t^3$then	
1454	(a-1)-1 =	A. a-1 B. a C. -a D. None of above
1455	Question Image	D. all are correct
1456	Rational number is a number which can be written as a terminating decimal fraction or a	A. Non-terminating decimal fraction B. Non-recurring C. Recurring decimal fraction D. a, b and c
1457	Sum of first n terms of an arithmetic series is	
1458	In (x + iy), y is called as	A. Imaginary part B. Complex number C. Real part D. None of above
1459	Question Image	A. 0 B. 1
1460	G = {e, a, b, c} is an Abelian group with e as identity element. The order of the other elements are	A. 2, 2, 2 B. 3, 3, 3 C. 2, 2, 4 D. 2, 3, 4
1461	A matrix whose determinant is zero is said to be	A. Inverse B. adjoint C. singular D. None-singular
1462	The polynomial x - a is a factor of the polynomial f(x) if and only if	A. f(a) is positive B. f(a) is negative C. f(a) = 0 D. None of these
1463	Question Image	A. π / 3 B. π / 4 C. π / 2 D. π
1464	ax+by+c = 0 , represents a	A. Circle B. Parabola C. Straight line D. Quadratic circle
1465	A,G,H are in	A. A.P B. G.P C. H.P D. None of these
1466	The angle of depression of a point situated at a distance of 70 meters from the base of a tower is 45°. The height of the tower is	A. 70 m B. 85 m C. 35 m D. None of these
1467	The domain of $f(x) = \sqrt{(x-2)}$ is	A. R B. (0 , +∞)

1467	The domain of $y = \sqrt{(x^2-9)}$ is	C. $(-\infty, -3) \cup (3, +\infty)$ D. $(0, \infty)$
1468	The range of y = cot x = _____	A. -<i>∞</i>> y > +<i>∞</i> B. -<i>∞</i>> x > +<i>∞</i> C. -<i>∞ <</i>y < +<i>∞</i> D. None of above
1469	Question Image	
1470	The slope of y-axis is	A. 0 B. undefined C. 1
1471	Range of y = sec x is	A. $-1 \leq y \leq 1$ B. $y \geq 1$ or $y \leq -1$ C. $y \leq 1$or $y \geq -1$ D. -∞ < y < +∞
1472	Question Image	
1473	Power set of difference set N-W is	A. Empty set B. Infinite set C. Singleton set D. {0,∅}
1474	Question Image	A. a constant function B. linear function C. quadratic funtion D. none of these
1475	Every subset of a finite set is	A. Disjoint B. Null C. Finite D. Infinite
1476	The line l is horizontal if	A. m is undefined B. m=0 C. m=1 D. m=0-1
1477	A particle moving in a straight line with velocity V = (4-t2) where t is the line from a fixed point. The acceleration of the particle after 4 sec is.	A. -8 m/ sec² B. -4 m/sec C. -8m/sec D. -4m/sec2
1478	The domain the function : $f(x) = x^2$ is given by	A. R B. Set of all non-negative Real numbers C. R⁻¹ D. None of these
1479	A and B throw a dice. The probability that A's throw is not greater then B's is	A. 5 / 12 B. 7 / 12 C. 1 / 6 D. 1 / 2
1480	Range if y = cos x is	A. $-1 \leq y \leq 1$ B. -1 < y < 1 C. -∞ < x < +∞ D. None of these
1481	Domain of tangent function is	
1482	The number z so that the triangle with vertices A(1,-1,0),B(-2,2,1)and C(0,2,z) is a right triangle with right angle at vertex C	A. 1,2 B. -1,-2 C. 2,-1 D. -2,1
1483	The sample space for tossing a coin twice is	A. {H, T} B. {HH, HT, TH, TT} C. {H, T, HH} D. {HH, HT, TT}
1484	If $(1+x)^n = C_0 + C_1x + C_2x^2 + \ldots\ldots + C_nx^1$then $C_0C_2 + C_1C_3 + C_2C_4 + \ldots\ldots + C_{n-2}C_n =$	

1485	Question Image	
1486	The conjunction of 3>5, and 5<9, is	A. false B. true C. unknown D. disjunction
1487	The only function which is both even and odd is	A. f(x) =α B. f(x) = x C. f(x) =0 D. Both A & B
1488	Question Image	
1489	Question Image	A. ¹⁰C₆ B. ¹⁰C₅ C. ¹⁰C₄ D. None
1490	Question Image	
1491	If $\tan^{-1}3 + \tan^{-1}x = \tan^{-1}8$, then x=	A. 5 B. 1/5 C. 5/14 D. 14/5
1492	The square matrix A is skew Hermitian when (A)'=	A. A B. A' C. -A D. A
1493	Question Image	A. A B. -A C. A^t D. A⁻
1494	Question Image	A. cos 3x + c B. - cos 3x + c
1495	Let f be real valued function continuous in the interval $(x,x_1) \subseteq D_f$ (the domain of f), then $f(x_1) - f(x)/x_1-x$ represents:	A. Instantaneous rate B. Average rate of change C. Differential coefficient D. None of these
1496	Question Image	
1497	Question Image	A. 2C B. C³ C. 1 D. 0
1498	Φ set is the _____ of all sets	A. Subset B. Union C. Universal D. Intersection
1499	Question Image	A. 0 B. U C. u/2 D. log u
1500	The general equation of a circle is	
1501	If A is a non-singular matrix then adj A is	A. Non-singular B. Symmetric C. Singular D. Non defined
1502	If x,y are two -ve distinct numbers then	A. A>G>H B. A<G<H C. A=G=H D. None of these
1503	x = 1 is in the solution of the inequality	A. x + 1 > 0 B. x - 2 > 0 C. 3x - 1 < 0 D. x + 2 < 0
1504	The A.M. of two numbers is 34 and G.M. is 16, the numbers are	A. 2 and 64 B. 64 and 3 C. 64 and 4 D. None of these
1505	Question Image	
		A. 3 x 3

1506	The order of the matrix A is 3 x 2 and that of B is 2 x 3. The order of the matrix BA is	B. 3 x 2 C. 2 x 5 D. 5 x 2
1507	Question Image	
1508	Question Image	A. a cot(ax + b) + c B. - a cot(ax + b) + c
1509	Question Image	
1510	A rule or correspondence that assigns to each element x in X a unique element y in Y is called a function from	A. X to X B. X to Y C. Y to X D. none of these
1511	Question Image	
1512	A quadrilateral whose diagonals are perpendicular bisector of each other is	A. Square B. Rectangle C. Rhombus D. Parallelogram E. Trapezium
1513	The point of concurrency of the angle bisectors of a triangle is called	A. incentre B. circumcentre C. e-centre D. centroid
1514	If S is a sample space and event set E = S then P(E) is	A. >0 B. 1 C. <1 D. 0
1515	Let A be a square matrix. Then, 1/2 (A-A') is	A. Skew-symmetric B. Symmetric C. Null D. None of the above
1516	Question Image	
1517	Question Image	
1518	Question Image	A. A B. A' C. U D. A A'
1519	-p is the	A. Implication of p B. disjunction of p C. negation of p D. conjunction of p
1520	If x = 1/x for x ∈ R then the value of x is	A. ±1 B. 0 C. 2 D. 4
1521	The square root of every incomplete square is an	A. Rational numbers B. Even numbers C. odd numbers D. Irrational numbers
1522	A card is drawn from a pack of cards numbered 1 to 52, the probability that the number on the card is a perfect square is	A. 1/13 B. 2/13 C. 7/52 D. None of these
1523	cotθ= sin 2θifθ=	
1524	Question Image	
1525	Given two numbers a and b. Let A denote the single A.M. between these and S denote the sum of n A.M.'s between them. Then S/A depends upon	A. n, a, b B. n, a C. n, b D. n
1526	The distance between the parallel lines 3x - 4y + 3 =0 and 3x -4y + 7 = 0 is:	A. 2/3 B. 9/13 C. 4/5 D. 7/12
1527	The distance between the points (0,0) and (x,y) is	A. x²+ y² B. x C. y
		A. unary operation

1528	Extraction of square root of a given number is a	B. binary operation C. group D. inverse function
1529	If A and B are two sets then any subset R of B x A is called	A. relation on A B. relation on B C. relation from A to B D. relation from B to A
1530	Question Image	
1531	sin $(\alpha + \beta) =$	A. sinαcosβ- cosαsinβ B. sinαcosβ- cosαsinβ C. sinαcosα- cosβsinβ D. sinαcosα+ cosβsinβ
1532	The coefficient of the third term of $(8a-b)^{1/3}$, after simplification is	A. -228 B. 1/288 C. 1/220 D. -1/177
1533	For all points (x,y) on y-axis	A. x is positive B. x = 0 C. x is negative D. y = 0
1534	Question Image	A. Commutative property of addition B. Closure property of addition C. Additive inverse D. Associative property w.r.t. to addition
1535	Give A and B are matrices of order 3, then (A+B)' =	A. A' + B' B. 1/A + 1 /B C. 1/a' +1/B' D. A⁻¹+ B⁻¹
1536	Question Image	
1537	Consider the equation px2 + qx + r = 0 where p,q,r are real The roots are equal in magnitude but opposite in sign when	A. q = 0, r = 0,p ≠ 0 B. p = 0,qr≠ 0 C. r = 0,pq≠ 0 D. q = 0, pq≠ 0
1538	A tower subtends an angle of 30° at a point distant d from the foot of the tower and on the same level as the foot of the tower. At a second point, h vertically above the firs, the angle of depression of the foot of the tower, is 60°. The height of the tower is	A. h/3 B. h/3d C. 3h D. 3h / d
1539	The roots of the equation $ax^2 + bx + c = 0$ are complex/imaginary if	A. b²- 4ac < 0 B. b²- 4ac = 0 C. b²- 4ac > 0 D. None of these
1540	The5thand 13th terms of an A.P are 5 and-3 respectively The first term of the A.P is	A. 1 B. -15 C. 9 D. 2
1541	Which conjunction is not true ?	

1542	Question Image	A. 0 B. 1 C. -1 D. none of these
1543	In a diagonal matrix, all entries except in diagonal are	A. similar B. Zero C. One D. Real
1544	A function which is to be maximized or minimized is called an	A. Explicit function B. Implicit function C. Objective function D. None
1545	In the function f: A□B, the elements of a are called	A. Images B. Pre-images C. ranges D. Parameters
1546	A second degree equation in which coefficients of $x^2$and y^2 are equal and there is no product therm xy represents:	A. a parabola B. a circle C. an ellipse D. a pair of lines
1547	Question Image	A. 16 / 7 B. 6 / 17 C. 7 / 16 D. None of these
1548	Z is a	A. Infinite set B. Finite set C. Singleton set D. Set of all integers
1549	Question Image	
1550	Question Image	
1551	Question Image	A. quadratic function B. constant function C. trigonometric function D. linear function
1552	Question Image	A. 30° B. 60° C. 45° D. None of these
1553	Question Image	
1554	$(0.90)^{1/2}$is equal to	A. 0.99 B. 0.90 C. 0.80 D. 0.88
1555	Question Image	
1556	If Projvu = Projuv, then	A. Uand vare parallel B. |u|=|v| C. Uandvre perpendicular D. One ofuorv
1557	Two circle $x^2 + y^2+2x - 8 = 0$ and $x^2 + y^2 -6 + 6x -46 =0$:	A. touch internally B. do not intersect C. touch externally D. None of these
1558	Question Image	A. 2 B. 4 C. 8 D. 12
1559	Domain of 3 sin x is _____	A. [-3, 3] B. R C. Positive real numbers D. None of these
1560	Question Image	
1561	Which of the following is a scalar.	A. force B. frequency C. weight D. acceleration
1562	Question Image	A. 2 b B. 2 a C. 2 ab

		D. a + b
1563	The period of cosec 10x is _____	
1564	The maximum value of the quadratic function f(x) = -2x2+20x,is	A. 4 B. 3 C. 50 D. 7
1565	w^{73}= _____	A. 0 B. 1 C. w D. w²
1566	cos 2α=	A. sin²α+ cos²α B. -cosθ C. tanθ D. None of these
1567	An improper rational fraction can be reduced by division to a	A. Proper fraction B. Polynomial C. mixed form
1568	Question Image	A. 0 B. 20 C. 90 D. 80
1569	Question Image	
1570	In any triangle ABC,with usual notationαsinβ =____;	A. b sinα B. bsinβ C. αsinα D. None of these
1571	x = $\sin^{-1}$ 3, then the value of sin x is	A. √(3/2) B. 3 C. Not possible D. -1
1572	Question Image	
1573	if y=x^2 then dy/dx equals:	A. 2x B. x/2 C. 2x³ D. x³/2
1574	Question Image	
1575	If 4 $\sin^2\theta$=1, then values of$\theta$are	
1576	The equation (cos p - 1)x^2+ x (cos p) + sin p = 0 in the variable x, has real roots, then p can take any value in the interval	A. (0, 2π) B. (-π, -0) C. (0,π) D. None of these
1577	The value of the expression sinθ+ cosθlies between	
1578	Question Image	
1579	The standard form of the quadratic function f(x) = -x^2 +4x+2, is	A. (x-2)²+6 B. -(x-2)² + 6 C. (x-3)²+5 D. (x+4)²-7
1580	If S and P are the sum and the product of roots of a quadratic equation, then the quadratic equation is	A. x²+ Sx - P = 0 B. x²- Sx + P = 0 C. x²- Sx - P = 0 D. X²+ Sx + P = 0
		A. -2

1581	If f(x) = x^2then f(-2) is	B. 2 C. 4 D. -4
1582	Question Image	
1583	Question Image	
1584	If the line is parallel to they y-axis, then m is said to be:	A. zero B. undefined C. 1/2 D. -1
1585	The equation of the circle whose centre is (-3, 5) and having radius 7 is	A. (x-3)²+ (y+5)²= 7² B. (x-3)²+ (y+5)²= 7² C. (x-3)²+ (y-5)²= 7² D. x²+y²+6x-10y-15=0
1586	Question Image	A. 0 B. 1 C. 2 D. 3
1587	The nth term of an A.P., is 12-4n. Its common difference is	A. 8 B. 4 C. 4 D. 16
1588	Question Image	D. none of these
1589	If z = (x,y) , then $\bar{z}$ =	A. (-x,y) B. (x,-y) C. (-x, -y) D. None of these
1590	Sin 270° = _____	A. -1 B. 0 C. 1 D. Undefined
1591	$(x^3-1/2x)^6$ is	A. 15/16 x² B. 2/13 x² C. 17/7 x² D. 16/15 x²
1592	The velocity and acceleration at any point t of a particle which moves along straight line x = 5r-3	A. 5,3 B. 5,-3 C. 5,0 D. 10,0
1593	Addition and subtraction of two matrices A+B and A-B requires that the matrices be	A. equal dimension B. rectangular C. square D. identity
1594	The vector i = [1,0] is called unit vector along:	A. x-axis B. y - axis C. z- axis D. Botha a and y-axis
1595	Question Image	D. none of these
1596	The converse and Inverse are	A. Equivalent to each other B. Opposite to each other C. Equal to each other D. Not Equal to each other
1597	Cot 45° = _____	
1598	Question Image	A. 0 B. 1 C. -1 D. 2
1599	If points (-1 , h), (3,2) and (7,3) are collinear then h=	A. 3 B. 4 C. 0 D. None of these
1600	If f(x) = tan x then f(0) is	A. 0 B. 1 C. 1/2
		A. sinαcosβ- cosαsin<span style="font-family: "Times New Roman"; font-size: 24px; color: rgb(34, 34, 34); text-align: center; background-color: rgb(255, 255,

1601	sin (α -β)=	224);">β B. sinαcosβ+ cosαsinβ C. sinαcosα- cosβsinβ D. sinαcosα- cosβsinβ
1602	The direction cosines of any normal to the xy-plane are	A. <1, 0, 0> B. <0, 1, 0> C. <1, 1, 0> D. <0, 0, 1>
1603	If $S_r$denotes the sum of the first r terms of a G.P., then S_n, S_{2n}- S_n, S_{3n}- $S_{2n}$are in	A. A.P. B. G.P. C. H.P. D. None of these
1604	Question Image	A. π B. 2π C. π/2 D. None of these
1605	The distance between the points (2, 2) and (3, 3) is	A. 10 C. 5 D. 2
1606	Question Image	
1607	The equation |x +4| = x has solution	A. x = -2 B. x = 2 C. x = -4 D. x = 4
1608	If G is the centroid of the triangle, then GA +GB+GC=	A. 0 B. 1 C. -1 D. 3
1609	Which of the following is a vector.	A. energy B. force C. work D. power
1610	If a statement S(n) is true for n = 1 and the truth of S(n) for n = k implies the truth of S(n) for = k + 1, then S(n) is true for all	A. Real numbers n B. Integers n C. Positive integers n D. None of these
1611	We also the system of non-homogeneous linear equations by	A. a and b B. b and c C. c and a D. a, b and c
1612	The term involving x4 the expansion (3-2x)7 is	A. 217 x4 B. 15120x4 C. 313x4 D. -25x4
1613	A function in which the variable appears as exponent is called:	A. An identity function B. A logarithmic function C. an exponential function D. A rational function
1614	Question Image	
1615	The point which divides the line segment joining the points (a, b) and (c, d) in the ratio 2 : 3 internally is	D. none of these
1616	If A=B, then	A. A⊂B and B⊂A B. A⊆B and B⊈A C. A⊆B and B⊆A D. None of these

1617	General solution of 1 + cos x = 0 is	
1618	The common ration of a geometric sequence cannot be	A. 0 B. 1 C. 2 D. 3
1619	What is the value of cos-1(1/2)?	A. π/3 B. π/4 C. 3π/2 D. π/6
1620	Roots of the equation $x^2+ 5x - 1 = 0$ are	A. Rational B. Irrational C. Complex D. None of these
1621	The probability that a slip of numbers divisible by 4 is picked from the slips of number 1,2,3,4,.....10 is	A. 1/5 B. 2/5 C. 1/10 D. 3/10
1622	Question Image	A. Parallel to the plane B. At right angles to the plane C. Lies in the plane D. Meet the plane obliquely
1623	Question Image	
1624	Question Image	A. 2 B. 4 C. 8 D. 16
1625	If A is non singular, and B is an nxn matrix, such that $B=0_{nxn1}$then AB=	A. A B. Null C. A⁻¹ D. None singular
1626	Which of the following ordered pair is a solution of the inequality x+2y<6?	A. (2,3) B. (2,2) C. (6,0) D. (1,1)
1627	For an A.P common difference d	A. Can be zero B. May or may not zero C. Cannot be zero D. None of these
1628	Second derivative of $y = x^9+ 10x^2+ 2x - 1$ at x = 0 is	A. 10 B. 20 C. 12 D. 1
1629	The total cost of 2 apples and 3 oranges is $1.70, which of the following is true	A. The cost of one apple B. The cost of one orange C. Both have equal cost per item D. Cost of each single item can not be determined
1630	If $s = 2t^3- 3t^2+ 15t - 8$ is the equation of motion of a particle, then its initial velocity is	A. 8 B. 15 C. -6 D. None
1631	If n € N , then n(n+3) is always	A. Multiple of 3 B. Multiple of 6 C. odd D. even
1632	a >b ⇒a +c >b +c is known as	A. Trichotomy property B. Additive property of inequality C. Transitive property D. Multiplicative property
1633	The positive value of k for which the equation x2 + kx + 64 = 0 has one of the roots 0	A. 4 B. 64 C. 8 D. All values of k
1634	Question Image	
1635	If sin A = cos A, 0°<A<90° then A is equal to	A. 1 B. 1/2 C. 0 D. None of these
	If a,β are the roots of the equation x2 + kx +12	A. 0 B. +1

1636	If a,β are the roots of the equation x2 + kx +12 = 0 such that a - β = 1, the value of k is	B. ±1 C. ±5 D. ±7
1637	The middle term(s) of (a+x)11 is	A. 6th term B. 6thor 7th C. 7th term D. 6thand7th
1638	Question Image	D. none of these
1639	Period of cos 2x is _____	
1640	The measure of the acute angle between the lines represented by x2 -xy -6y2 =0 is	A. 120° B. 30° C. 130° D. 45°
1641	cos(a-β) = _____;	A. sin a cosβ + cos a sinβ B. sin a cos β - cos a sinβ C. cos a cos β + sin a sinβ D. cos a cosβ - sin a sinβ
1642	f(x) = x3-x/x2+1 is :	A. an even function B. an odd function C. an even and implicit function D. neither even nor a odd
1643	Equation of the chord of contact to the tangents drawn from (-3,4) to the circle x2 + y2 = 21	A. -3x + 4y =21 B. 4x - 3x = 0 C. -3x + 4y = 25 D. None of these
1644	If the matrices A and B are conformable for multiplication then $(AB)^t$= _____	A. AB B. A^tB^t C. B^tA^t D. A^tB
1645	Z is the set of integers (Z.*) is a group with a * b = a +b +1, a,b ∈ G.then inverse of a is	A. -a B. a +1 C. -1-a D. None of these
1646	Question Image	A. 6, -12, -18 B. -6, 4, 9 C. -6, -4, -9 D. -6, 12, 18
1647	Question Image	A. 4 B. 6 C. 8 D. 10
1648	Question Image	A. Reciprocal equation B. Exponential equation C. Radical equation D. None of these
1649	Period of sec x is _____	
1650	Question Image	D. none of these
1651	Point (2,0) lies on trigonometric function f(x)=_____;	A. sinx B. cosx C. tanx D. secx
1652	If the angle of a triangle are in the ratio 2 : 3 : 7, the triangle is	A. Obtuse B. Acute C. Right angle D. Isosceles
1653	Question Image	
1654	Question Image	
1655	The trigonometric function are continuous whenever	A. They are defined B. their limit exist C. Their period is given D. All are incorrect
1656	x = r2, y = 1 are the parametric equation of	A. Circle B. Hyperbola C. Ellipse D. Parabola
1657	Sec 30° = _____	

1658	If we have a statement "if p then q" then q is called	A. Conclusion B. Implication C. Unknown D. Hypothesis
1659	The points (x, y) which satisfy a linear inequality in two variables x and y from its	A. domain B. range C. solution D. none of these
1660	The nth term of an A.P is (3n+5) Its 75th term is	A. 26 B. 7 C. 21 D. Cannot be determined
1661	Question Image	
1662	If A is any matrix then its additive inverse is	A. A B. A⁻¹ C. A^t D. -A
1663	Question Image	
1664	If P is a whole number greater than 1, which has only P and I are factors. Then P is called	A. Wholw number B. Prime number C. Even number D. Odd number
1665	Question Image	
1666	Question Image	A. 15 B. 15 i C. -15 i D. -15
1667	The sum of complex number (a,b) and (c,d) is	
1668	The distance of the point (-2 , -3) from y-axis is	A. 2 B. -2 C. 3 D. -3
1669	Eight chairs are numbered 1 to 8. Two women and three men wish to occupy one chair each. First, the women choose the chairs from amongst the chairs marked 1 to 4 and then the men select the chairs from amongst the remaining. The number of possible arrangement is	A. ⁶C₃x ⁴C₂ B. ⁴C₂x ⁴P₃ C. ⁴P₂x ⁶P₃ D. None of these
1670	The Principal value of sin-1 (-1/1/2)	A. π/2<o:p></o:p> B. -π/2<o:p></o:p> C. π<o:p></o:p> D. -π<o:p></o:p>
1671	The solution of the quadratic equation x2 -7x + 10=0, is	A. 2 B. 5 C. 2,5 D. 7
1672	Find all the angles between 0 and 360 degree such that sinx = -1/2?	A. 210.330 B. 30.210 C. 30.150 D. 330.150
1673	Question Image	A. xa^{x-1} B. a^x C. x in a D. a^xln a
1674	Question Image	
1675	Range of cot$\theta$is	A. (+∞to -∞) B. (-1 to +1) C. (-5 to +5) D. Set of even numbers only
1676	A card is drawn from a pack of cards numbered 2 to 53. the probability that the number on the card is prime number less than 20 is	A. 2 / 13 B. 4 / 13 C. 5 / 13 D. 8 / 13
		A. Does not exist because f is unbounded

1677	Question Image	A. Does not exist because f is unbounded B. Is not attained even though f is bounded C. Is equal to 1 D. Is equal to -1
1678	If A is singular then |A| = _____	A. 1 B. 0 C. 2 D. None of these
1679	Question Image	A. 0 B. -1-w²
1680	Question Image	
1681	Coordinates of the focus of the parabola x^2 - 4x -8y-4=0 are:	A. (0,2) B. (,0,1) C. (2,0) D. (1,2)
1682	The multiplicative inverse of -1 in the set {1-,1} is	A. 1 B. -1 C. ±1 D. 0 E. Does not exist
1683	The formula an = arn-1represents	A. nth term of G.P B. Sum of the first n terms C. G.M between a and b D. None of these
1684	5th term of a G.P. is 2, then the product of first 9 terms is	A. 256 B. 128 C. 512 D. None of these
1685	Sum of all the four forth roots of unity is	A. 1 B. -1 C. i D. 0
1686	Question Image	A. 5 B. 25 D. 3
1687	The greater part of our knowledge,is based on	A. Deduction B. Induction C. Conjunction D. Disjunction
1688	Which of the vectors have opposite direction?	
1689	Question Image	
1690	Question Image	A. 295 B. 495 C. 395 D. 722
1691	Question Image	
1692	i^9 =	A. i² B. -1 C. 1 D. i
1693	Question Image	
1694	Question Image	
1695	Logic in which there is scope of third or fourth possibility is called.	A. non-Aristotlian logic B. Aristotlian logic C. Postulates D. induction logic
1696	Question Image	
1697	Question Image	B. a f(x) + c C. f(x) + a
1698	i^2 =	A. 1 B. 2 C. -1 D. 0
1699	Question Image	
		A. Reflexive property

1700	Question Image	B. Symmetric property C. Transitive property D. Additive property
1701	Number of permutations of n distinct objects taken r(<n - 3) at a time which exclude 3(<n) particular objects is	A. 3! P(n, r - 3) B. P(n, 3) P(n, r - 3) C. P(r, r)P(n, r - 3) D. P(n - 3, r)
1702	(a+bi) - (c+di)=	A. (a+b) = (c+d) B. (a+c) + i(b+d) C. (a - c) + (c- d)i D. (a - c)+ (b - d)i
1703	Maximum value of z =15x +20y subject to 3x+ 4y≤ 12,x,y≥ 0 is given by	A. 46 B. 60 C. 50 D. 70
1704	The radian measure of the central angle of an arc 50 m long on a circle of radius 25 m is	A. 3 B. 2 C. 1
1705	If three non-collinear points through which a circle passes are known, then we can find the	A. variables x and y B. value of x and c C. three constant f, g and c D. inverse of the circle
1706	The equation of line passing through intersection of line x = 0 and y = 0 and the point (2,2) is	A. y = x B. y = x - 1 C. y = x + 1 D. y = x + 1
1707	Question Image	
1708	In one hour the minute hand of a clock turns through	
1709	1st four terms of the expansion $(1-x)^{-2}$are	A. 1 + 2x + 3x²+ 4x³ B. 3x²+ 2x + 1 C. 1 + 3x + 4x²+ 5x³ D. None of these
1710	Question Image	A. An empty set B. Universal set C. A singleton set D. None of these
1711	Express cos 320^o between $0^o$and 45^o	A. cos 45^o B. cos 30^o C. -cos 40^o D. cos 40^o
1712	Question Image	
1713	The physical quantity which possesses both magnitude and direction is called a	A. scalar B. vector C. constant D. none of these
1714	Question Image	A. 7 B. 5 C. 6 D. None of these
1715	Question Image	A. 1 B. 1/2 C. 0 D. None
1716	Question Image	
1717	A die is thrown 100 times. If getting an odd number is considered a success, the variance of the number of successes is	A. 50 B. 25 C. 10 D. 100
1718	∀x,y∈ R and x < 0, y < 0, which one is true	A. xy < o B. xy = o C. xy > o D. None of these
1719	The product of cube roots of unity is	A. Zero B. 1 C. -1 D. None of these
1720	Question Image	

1721	The number of different ways of describing a set is	A. One B. Two C. Three D. Four
1722	Question Image	
1723	The set of complex numbers forms a group under the binary operation of	A. Addition B. none of these C. Division D. Subtraction
1724	A square matrix A for which A^t= -A is called a	A. Column matrix B. Symmetric matrix C. Skew-symmetric matrix D. Row matrix
1725	f(x) = x is	A. trigonometric function B. exponential function C. quadratic function D. identify function
1726	Question Image	
1727	Question Image	A. N B. r C. 2r D. π
1728	Which of the following represents a vector	D. (x, y)
1729	Question Image	
1730	The disjunction of two statements p and q, is denoted symbolically as	
1731	If the roots of ax2 + b =0 are real and distinct then	A. ab > 0 B. a = 0 C. ab < 0 D. a > 0,b > 0
1732	In following question, a number series is given with one term missing. choose the correct alternative that will same pattern and fill in the blank spaces.1 , 4, 9, 16, 25, x	A. 35 B. 36 C. 48 D. 49
1733	Question Image	A. 2 x 2 B. 2 x 3 C. 3 x 2 D. 3 x 3
1734	The identity element with respect to subtraction is	A. 0 B. 1 C. -1 D. Does not exist
1735	the function y = mx+c is, called linear function, because	A. it has only two variables B. it has one varible C. its graphs is straight line D. its graphs is circle
1736	lxn matrix of the form$[a_{i1},a_{12}.....a_{in}]$ is said to be a	A. null matrix B. Scalar matrix C. Equal matrix D. Row matrix
1737	A key ring is an example of	A. Permutation B. Circular permutation C. Combination D. None
1738	The function {f(x,y)|y = ax2 +bx +c} is	A. One-one function B. Constant function C. Onto function D. Quadratic function
1739	Question Image	
1740	Question Image	
1741	Which one the valid rood of $3x^3 - 8x^2 - 5x + 8$ =?	A. 4 B. 3 C. 8 D. A and B both

1742	(1, 2) is in the solution of the inequality	A. 2x + y > 8 B. 2x + y <u><</u> 6 C. 2x - y > 1 D. 2x + 3y < 2
1743	InΔABC if y = 90° then the Pythagoras theorem is	A. b2 + c2 =a2 B. a2 + b2 = c2 C. a2 +c2 = b2 D. None of these
1744	Question Image	A. x = 3 B. x = 1/5 C. x = 0 D. None of these
1745	Question Image	A. 20 B. 10 C. 0 D. None of these
1746	Question Image	A. 5 / 12 B. 3 / 8 C. 5 / 8 D. 7 / 4
1747	Question Image	
1748	The angle between the vectors u =2i - i + k and v = -i +i is:	A. 3π/2 B. 2π/3 C. 5π/6 D. π/3
1749	A coin is tossed. If head comes up, a die is thrown but if tail comes up, the coin is tossed again. The probability of obtaining a head and an even number is	A. 1/8 B. 2/8 C. 3/8 D. None of these
1750	The range of the tangent function is	A. all real numbers B. -1 ≤ x ≥ 1 C. natural number D. z⁺
1751	Question Image	A. a^x B. a^xln a
1752	If A and B are two matrices such that AB = B and BA =A, then A^2+ B^2=	A. 2 AB B. 2 BA C. A + B D. AB
1753	Question Image	
1754	Area of the triangle whose vertices are (2,3), (0,1),(0,0) is	A. 6 B. 2 C. 4 D. 1
1755	For what value of k, 3x -2y+ k= 0 is tangent to the circle x2 +y2 +6x -4y =0	A. k=0 B. k=0 or 26 C. k = 26 D. k=-13
1756	[i,j,k]	A. 0 B. 2 C. 1 D. -2
1757	The first three terms in the expansion of (1 + x)^{3}are	A. 1 + 3x +6x² B. 1- 3x + 6x²\ C. -3 -3x -6x² D. 1- 3x -6x²
1758	The value of 7π /9 in terms of degrees is	A. 150^o B. 130^o C. 135^o D. 140^o
1759	Which one is quadrantal angle	A. 8181710° B. 2345° C. -8181180° D. -2344°
1760	Solving the eqution x2+(a+b) x +ab=0 for gives:	A. x = -a. x = b B. x = a, x =-b C. x=-a, x=-b D. x =a, x =b
		A. All elements of A also the elements of B

1761	A = B iff	A. All elements of A also the elements of B B. A and B should be singleton C. A and B have the same number of elements D. If both have the same element
1762	Which of the following is skew symmetric matrix	
1763	Question Image	
1764	Question Image	
1765	The sum of n terms of a series is denoted by	A. d B. n C. S_n D. a_n
1766	Distance between A(3, 8), B(5, 6) is	
1767	Tan 30° = _____	
1768	If one root of the equation $ix^2 - 2(i + 1)x + (2 - i) = 0$ is 2 - i, then the other root is	A. -i B. 2 + i C. i D. 2 - i
1769	If no two elements of ordered pair of a functions from A into B are equal, then it is called.	A. Surjective B. Injuctive C. Bijective D. Onto
1770	Question Image	
1771	Question Image	
1772	The set of integer is	A. Finite group B. A group w.r.t addition C. A group w.r.t multiplication D. Not a group
1773	Shifting origin to (-3,2), the new coordinates of (-6,9) are:	A. (-9,7) B. (3,7) C. (-3,7) D. (3,-7)
1774	The mid point of the line segment joining the points A(-8,3) and B(2,-1) is	A. (-3,1) B. (-6,2) C. (5,2) D. (-5,2)
1775	The first three terms in the expansion of $(1 - x)^{-1}$ are	A. 1 + x + x² B. 1 - x - x² C. -1 -x +x² D. 1 - x + x²
1776	Question Image	A. 8 B. 1/56 C. 56 D. None of these
1777	The number of arbitrary constants in the general solution of a differential equation is equal to the different equation	A. Order B. Degree C. Variables D. All are correct
1778	Question Image	A. 1 B. -1 C. 0 D. None of these
1779	Which type of the matrix-has no inverse?	A. Square B. Adjoint C. Singular D. Non-singular
1780	Question Image	
1781	Apollonius was a:	A. Rocket B. Muslims scientist C. Greek mathematicians D. Method of finding conics
1782	Question Image	A. 1/3 B. 1 C. 3 D. None of these
1783	Question Image	A. -8 B. 8

1783	Question Image	C. 8i D. 32
1784	Question Image	
1785	The modulus of 12-5i is:	A. 7 B. 13 C. √7 D. 119
1786	Question Image	
1787	Question Image	
1788	If y = 3 x + 2cos x, then dy/dx =	A. 3-2 sin x B. 3-t sin x C. 3x² - 2sin x D. 3(1-4 sin x)
1789	Question Image	
1790	The sum of all positive integral multiple of 5 less than 100 is	A. 950 B. 760 C. 1230 D. 875
1791	Question Image	A. An expression B. Rational fraction C. Equation D. Identity
1792	For any real numbers x,y,xy=o ⇒	A. x ≠ 0 ∧ y ≠ 0 B. x = 0 ∨ y = 0 C. x = 0 D. y = 0
1793	Question Image	
1794	Domain of cosecθ is	
1795	Four cards are drawn at random from a pack of 52 playing cards. The probability of getting all the four cars of the same suit is	A. 44/4165 B. 22/4165 C. 11/4165 D. None of these
1796	Question Image	
1797	The vector k = [0,0,1] is called unit vector along:	A. x -axis B. y - axis C. z- axis D. None of these
1798	The point which divides the line joining the points (2, 4, 5) and (3, 5, -4) in the ratio -2 : 3 lines on	A. ZOX plane B. XOY plane C. YOZ plane D. None of these
1799	Question Image	
1800	Question Image	
1801	f(x) = sin x + $\cos^2 x$ is	A. trigonometric function B. algebraic function C. exponential function D. logarithmic function
1802	The number of combinations of 10 different objects taken 8 objects at a time is	A. 90 B. 45 C. 55 D. 50
1803	By expressing cos 113° in terms of trigonometrical ratios, answer will be	A. − cos 76° = -0.7093 B. − cos 65° = -0.4258 C. − cos 67° = -0.3907 D. − cos 62° = -0.8520
1804	Roots of the equation x^2- 7x + 10 = 0 are	A. {2, 5} B. {-2, 5} C. {2,5} D. {-2,-5}
1805	Question Image	D. both a & c
1806	Question Image	A. (2x4) B. (2x7) C. (2x3)

		D. (7x2)
1807	Question Image	A. c = 0 B. c = -1 C. c = -2 D. c = 1
1808	If one end of the diameter of the circle $2x^2 + 2y^2 - 8x - 4y = 2 = 0$ is (2 ,3), the other end is:	A. (2,1) B. (-2,1) C. (2,-1) D. (1,-1)
1809	The multiplicative inverse of x such that x = 0 is	A. -x B. Does not exist C. 1/x D. ±1
1810	If the sum of two unit vectors is a unit vector the the magnitude of their difference is	A. √2 B. √3 C. 1 D. None of these
1811	Question Image	A. 4 B. 3 C. 2 D. 1
1812	The roots of (b-c)x2+(c-a) x+a-b=0 are equal if	A. 2b = a+c B. 2a = b+c C. 2c = a+b D. a + b + c =0
1813	The number of divisors of 1029, 1547 and 122 are in	A. A.P. B. G.P. C. H.P. D. None of these
1814	sec (-360°) = _____	A. 0 B. 1 C. 2 D. 3
1815	The second degree equation of the form Ax2 +By2 +Gx +Fy +C =0 represent hyperbola if	A. A = B≠ 0 B. A≠ B and both are of same sign C. A≠ B both are of opposite sign D. Either A = 0 or B =0
1816	Roots of the equation $x^2 - x = 2$ are	A. {2, -1} B. {1, 0} C. {2, 1} D. {-2, 1}
1817	10 is a even number or 0 is a natural number, then truth value of this disjunction is	A. False B. True C. Not discussed D. negation of first
1818	$f(x) = ax^2 - 3x - 5$, and $f^1(2) = 9$, a is equal to	A. 2 B. 3 C. -2 D. 4
1819	The distance of the point (2, -3) from x-axis is	A. -2 B. -3 C. 2 D. 3
1820	A line segment whose end points lie on a circle is called	A. The secant of the circle B. The arc of the circle C. The chord of the circle D. The circumference of the circle
1821	Question Image	A.
1822	The line through the intersection of the lines x+ 2y+ 3= 0 : 3x +4y +7 =0 and making equal intercepts on the axes is	A. x+ y+ 1= 0 B. x+ y- 2= 0 C. x+ y+ 2= 0 D. 2x +y +2 =0
1823	Question Image	D. none of these
1824	x = secθ,y = tanθ are the parametric equations of	A. Circle B. Hyperbola C. Ellipse D. parabola
	The line through the centre and perpendicular	A. Major axis B. Minor axis

1825	The line through the centre and perpendicular to the transverse axis is called the	B. Minor axis C. Focal axis D. Conjugate axis
1826	Which of the following sets in infinite	A. The set of students of your class B. The set of all schools in Pakistan C. The set of natural numbers between 3 and 10 D. The set of rational numbers between 3 and 10
1827	The greatest term in the expansion of $(3+2x)^9$, when x=1 is	A. 4th B. 4th and 5th C. 5th D. 6th
1828	If $f(x) = x^3 - 2x^2 + 4x - 1$ then f(2) is	A. 7 B. -16 C. 16 D. -9
1829	Question Image	
1830	π is _____	A. A complex number B. A rational number C. A natural number D. An irrational number
1831	Question Image	
1832	A conjunction of two statement p and q is true only if	A. p is true B. q is true C. Both p and q are true D. both p and q are false
1833	If $\forall a,b \in R$, then $a+b \in R$ is a property	A. Closure law of addition B. Associative law of addition C. Additive inverse D. Additive identity
1834	There are _____ basic techniques for solving a quadratic equation	A. Two B. Three C. Four D. None of these
1835	Question Image	A. 3 x 2 B. 2 x 3 C. 3 x 3 D. 2 x 2
1836	The set of all positive even integers is	A. Not a group B. A group w.r.t. subtraction C. A group w.r.t. division D. A group w.r.t. multiplication
1837	The decimal fraction in which we have finite number of digits in its decimal part is called.	A. recurring decimal fraction B. Non terminating faction C. Non recurring fraction D. terminating decimal fraction
1838	If A is a non singular matrix then A^{-1}= _____	
1839	Question Image	A. (-6,4) B. (-3,2) C. (6,-4) D. (3, -2)
1840	Inverse of the function y-10x is	A. y=logx B. y=lnx C. x=10y D. x=10y
1841	Question Image	
1842	How many different 5-digit even numbers are possible form digit 1,2,4,6,8	A. 4 : 4! B. 4! C. 5! D. 4!+4!
1843	Let the equation $ax^2 - bx + c = 0$ have distinct real roots both lying in the open interval (0, 1) where a, b, c are given to be positive integers. Then the value of the ordered triplet (a, b, c) can be	A. (5, 3, 1) B. (4, 3, 2) C. (5, 5, 1) D. (6, 4, 1)
1844	Two matrices are conformable for addition,if they are	A. equal B. adjoint C. same order D. disjoint

1845	If A is non-empty set, any subset of A x A is called a relation in	A. A B. B C. ⌀ D. r
1846	Sin 50°-sin 70°+sin 10° is equal to	A. 1 B. 0 C. 1/2 D. 2
1847	If A,B and C are three matrices of same order, and (A+B)D=AD+BD, what is this property called?	A. right distributive property B. Left distributive property C. Associative property D. Lest associative property
1848	The order of the matrix A is 3 x 5 and that of B is 2 x 3.The order of the matrix BA is	A. 2 x 3 B. 3 x 2 C. 2 x 5 D. 5 x 2
1849	An observer on the top of a cliff 200 m above the sea level, observes the angles of depression of two ships on opposite sides of the cliff to be 45° and 30°, respectively. The distance between the ships if the line joining them points to the base of cliff is	
1850	If a cone is cut by a plane perpendicular to the axis of the cone, then the section is a	A. parabola B. circle C. hyperbola D. ellipse
1851	Two matrices A =|a|and B=|b_y|,and|by|are equal iff	A. a_{ij}=a_{ji} B. aij = bij C. aif = bij D. bij = bji
1852	1 radian = _____	A. 60° B. 57.296° C. 57.2° D. 180°
1853	H_1, H_2, H_3, ... $H_n$are called n harmonic means between a and b if a, H_1, H_2, H_3, ... H_nb are in	A. H.P. B. G.P. C. A.P. D. None of these
1854	The roots of the equation 4x - 3.2x+2 + 32 = 0 would include	A. 1 and 3 B. 1 and 4 C. 1 and 2 D. 2 and 3
1855	If origin is the mid point of (a, -3) and (-5, b) then	A. a = -5 , b = -3 B. a = 5 , b =3 C. a = -5 , b = 3 D. a = 5 , b = -3
1856	The set of complex numbers forms a group under the binary operation of	A. Addition B. Multiplication C. Division D. Subtraction
1857	The roots of ax2+bx+c=0 are	A. Rational ⇔ b2 -4 ac ≥ 0 B. Irrational ⇔ b2-4 ac > 0 C. Real ⇔ b2-4 ac ≠ 0 D. Rational⇔ b2-4 ac = 0
1858	Question Image	
1859	If the points (a,2b):(c,a+b):(2c-a,h) lie on the same line then	A. h=2a B. h=a+b C. h=ab D. h=ac
1860	There is no element common in	A. N and W B. E and W C. N and O D. Q and Q'
1861	Question Image	A. conclusion B. consequent C. hypothesis D. conditional
1862	Question Image	
1863	Question Image	

1864	If a > 0,b > 0, c > 0 then the roots of the equation $ax^2 + bx + c = 0$ are	A. Real and negative B. Non-real with negative real parts C. Real and positive D. Nothing can be said
1865	Question Image	C. 1 D. 0
1866	There are 50 students in a class out of these 38 used desktop computer 16 out of these used laptop. It is noted that five students neither used laptop of computer. The students having both laptop and computer are A. Based on the information find out the greatest value of A.	A. 16 B. 8 C. 4 D. 0
1867	The equation: $x^2 + y^2 + 2gx + 2fy + c = 0$, represents	A. pair of lines B. a circle C. a general second degree equation D. a hyperbola
1868	Additive inverse of -a -b is	A. a B. -a + b C. a - b D. a + b
1869	Root of the equation $3^{x-1} + 3^{1-x} =$ is	A. 2 B. 1 C. 0 D. -1
1870	Question Image	
1871	√25 is a number	A. Rational B. Irrational C. Natural D. Odd
1872	If points A (6,-1), B (1,3) and C (x,8) are such that AB=BC, then x =	A. 3,5 B. -3,5 C. 3,-5 D. -3,-5
1873	Two coins are tossed twice each. The probability that the head appears on the first toss and the same forces appear in the two tosses is	A. 1/4 B. 1/2 C. 1/3 D. 1/7
1874	The mid point of the line joining the points $P(x_1, y_1)$ and $Q(x_2, y_2)$ is	
1875	Let the sequence 1, 2, 2, 4, 4, 4, 4, 8, 8, 8, 8, 8, 8, 8, 8, ... where n consecutive terms have the value n, then 1025th term is	A. 2⁹ B. 2¹⁰ C. 2¹¹ D. 2⁸
1876	Question Image	A. additive property B. multiplicative property C. additive identity D. multiplicative identity
1877	If origin is the mid point of (a,3) and (5,b) then	A. a = -5 , b = -3 B. a = 5 , b =3 C. a = -5 , b = 3 D. a = 5 , b = -3
1878	Question Image	A. -3 -2i B. 3 +2i C. 1 + 2i D. 1 - 2i
1879	Question Image	A. 1 B. 0 C. -1 D. 2
1880	The factorial of a positive integers is a (an)	A. Rational number B. Positive integer C. Real number D. None
1881	In the expansion of $(a + x)^n$ the general term T_{r+1} is	
1882	The domain and range of a trigonometric function can be allocate by their	A. graph B. Continuity C. Discontinuity

		D. Periods
1883	Question Image	
1884	The tangent to the parabola y2 =4ax and perpendicular line from the focus on it meet	A. x =0 B. y =0 C. x =-9 D. y = -a
1885	x =r cosθ,y= sinθ are the parametric equations of	A. Circle B. Ellipse C. Parabola D. Hyoerbola
1886	Question Image	
1887	Question Image	
1888	The distance of the point (1.1) from the origin is	A. 0 B. 2
1889	¡^{101}=	A. i B. i² C. -i D. -1
1890	3.5+5.4=5.4+3.5 =8.9 this property of addition is called	A. additive identity B. assoclative property C. commulative property D. closure property
1891	Question Image	A. A rational number B. A irrational number C. An even integer D. A factor of 36
1892	The solution set of sin x + cos x = 0 is	
1893	An equation which holds good for all values of variables is called	A. Equation B. Conditional equation C. Constant D. None
1894	The parabola y2 + 2y + x = 0 lie in _____ quadrant.	A. First B. Second C. Third D. Fourth
1895	Name the property used in 4 + 9 = 9 + 4	A. Associative property of addition B. Commutative property of addition C. Distributive property D. Additive identity
1896	If all members of a sequence are real numbers then it is called	A. A.P B. Real Sequence C. G.P D. None of these
1897	Question Image	A. additive property B. multiplicative property C. additive inverse D. additive identity
1898	99th term of the series 2 + 7 + 14 + 23 + 34 + ... is	A. 9998 B. 9999 C. 10000 D. None of these
1899	If f(α) = b2 and g (c) =d where c=b2 then (gof) (a) is	A. α B. c C. b D. d
1900	Question Image	
1901	If the equation x2+2x-3=0 and x2+3x-k=0 have a common root then the non - zero value of k is	A. 1 B. 3 C. 2 D. 4
1902	Question Image	
1903	If c = 2i+j+k and d= -1 + 4j +2k, then [c-d]=	A. √7 B. √41 C. √19 D. √(2&7)

1904	The standard parabolic form of the equation $f(x) = x^2 + 4x + 1$ is	A. x(x+4)+1 B. (x+2)²-3 C. (x+4)³ + 9 D. x(x-2)²+1
1905	Write down the power set of {9, 11}	
1906	The perimeter of a sector of a central angle of measure 1 radian out off an are of length 35cm is	A. 35 cm B. 70 cm C. 140 cm D. 105 cm
1907	Question Image	
1908	Question Image	A. A B. A' C. U D. U'
1909	If S is a sample space and event set E =Φ then P(E) is	A. >0 B. 1 C. <1 D. 0
1910	The mid point of the line segment joining the points (3,-1) and (-3,1) is	A. (3,-1) B. (0,0) C. (2,2) D. (4,4)
1911	Question Image	D. none of these
1912	$p(x) = 2x^4 - 3x^3 + 2x - 1$ is polynomial of degree	A. 1 B. 2 C. 3 D. 4
1913	There will be no inverse if the function is	A. one -to - one B. One to many C. onto D. into
1914	The matrix A = [aij]mxn with m≠n is	A. Rectangular B. Symmetric C. Square D. None
1915	Range of $\sin\theta$ is	
1916	Question Image	
1917	Question Image	
1918	Which one represents a sequence	A. an B. Sn C. a(n) D. {an}
1919	Question Image	
1920	Question Image	
1921	Question Image	
1922	The set of real roots of the equation $\log_{(5x+4)}(2x+3)^3 - \log_{(2x+3)}(10x^2 + 23x + 12) = 1$ is	A. {-1} B. {-3/5} C. Empty set D. {-1/3}
1923	A relation A into B in which Domain is not equal to A, is called	A. into function B. onto function C. None of these D. surjective
1924	A sequence of number whose reciprocals form an arithmetic sequence is called	A. Geometric sequence B. Arithmetic series C. Harmonic sequence D. Harmonic series
1925	Which of the following is an identity matrix?	D. none of these
1926	Question Image	
1927	If (0, 0) and (-1, 0) are end points of a diameter, then the equation of the circle is	
1928	Question Image	

1928	Question Image	
1929	$\cos^{-1}(\cos x) =$	A. x B. cos x C. x = 1/x D. cos⁻² x
1930	If f(√x)=sin x , then f'(x) =_____;	A. 2xcosx2 B. cosx2 C. cos√x D. None of these
1931	Question Image	
1932	The proposition S(k+1) is true when _____ is true∀K∈N	A. S(n) B. S(k) C. S(1) D. S(k-1)
1933	Intersection of two parabolas	A. parabola B. Two points C. Four points D. Hyperobla
1934	If $A = \{x / x \in R \wedge x^2 - 16 = 0\}$ then A =	A. - x B. Infinite set C. Φ D. {-4,4}
1935	Range of 2 tan x is _____	A. [-2, 2] B. -1 < x < 1 C. R D. None of these
1936	Question Image	A. Diagonal matrix B. Scalar matrix C. Triangular matrix D. Identity matrix
1937	Considering Cosine Rule of any triangle ABC, possible measures of angle A includes	A. Angle A is obtuse B. Angle A is acute C. Angle A is right-angle D. All of above
1938	In the interval 0≤ x ≤ π, the sine is	A. Not a function B. Not defined C. Infinity D. Not one-to-one function
1939	202.04 is an example of	A. Recurring decimals B. Non-recurring decimals C. Terminating decimals D. None of above
1940	If circumference of circle is divided into 360 congruent parts the angle subtended by one part at the centre of circle is	A. 1 degree B. 1 second C. 1 minute D. 1 radian
1941	Question Image	
1942	Question Image	
1943	Question Image	A. ab=-1 B. ab = 1 C. ab = 2 D. None
1944	Question Image	
1945	Question Image	A. 0 B. 1 C. 1/2
1946	A right angle is the angle of measure	A. 90' B. 60° C. 60" D. 90°
1947	cos 6θ + cos 2 θ =_____;	A. -2sin 4θ sin 2θ B. 2cos4θ cos2θ C. 2sin4θ cos2θ D. 2cos4θ sin2θ
1948	Question Image	A. x =0, y =4 B. x = -1, y = 2 C. x = 2, y = 3

		D. x = 3, y = 4
1949	if a_1 =3, d=7 and a_n =59 , then the number of terms in A.P is	A. 7 B. 9 C. 11 D. 13
1950	The different of tan x is	A. sec2 x B. ln |sec x| C. sec2 xdx D. -cos ec2 x
1951	Question Image	A. k3 B. 0 C. 3k D. k6
1952	Question Image	
1953	The perpendicular bisector of any chord of a circle	A. Passes through the centre of the circle B. Does not pass through the centre of the circle C. May or may not pass through the centre of the circle D. None of these
1954	A joint equation of the lines through the origin and perpendicular to the lines ax2 +2hxy +by2 =0 is indentical is ax2 +2hxy +by2 =0 if	A. h2 = ab B. a + b =0 C. a = b D. a≠ b E. a = b = 0
1955	Question Image	
1956	Question Image	
1957	Question Image	
1958	Question Image	A. 3 B. 1 C. 4
1959	Question Image	A. -1 B. 0 C. 1 D. None of these
1960	Question Image	
1961	Question Image	
1962	A farmer possesses 100 hectometers of land and wants to grow corn and wheat. Cultivations of corn requires 3 hours per hectometer while cultivation of wheat requires 2 hours per hectometer. Working hours cannot exceed 240. If he gets a profit of Rs. 20 per hectometer for corn and Rs. 15 per hectometer for wheat. The profit function for the farmer is	A. P(x, y) = 20x + 15y B. P(x, y) = 2x + 3y C. P(x, y) = x + y D. P(x, y) = 3x + 2y
1963	What is the period of sin 2x/3 cos 4x=?	A. π B. 2π C. π/2 D. π/3
1964	Question Image	
1965	Question Image	A. Diagonal matrix B. Scalar matrix C. Triangular matrix D. Identity matrix
1966	Question Image	
1967	Question Image	A. sec 3x + c B. - cosec 3x + c
1968	Question Image	
1969	The points (5, 2, 4)(6, -1, 2) and (8, -7, k) are collinear if k is equal to	A. -2 B. 2 C. 3 D. -1
1970	The 6th term of an arithmetic sequence whose first term is 3 and common difference in zero is	A. 18 B. 6 C. 3 D. 0
		A. Reflexive property

1971	Question Image	A. Reflexive property B. Symmetric property C. Cancellations property w.r.t. addition D. Transitive property
1972	Question Image	
1973	Question Image	
1974	Question Image	A. -1 B. 0 C. 1 D. undefined
1975	The value of sin 28°cos 17°+cos 28°sin 17°is	
1976	The area bounded by y = x (x2 - 4) and below x - axis is	A. 4 B. 0 C. -4 D. 8
1977	Question Image	A. 2 B. 6
1978	Question Image	
1979	Question Image	A. 0 B. 1 C. 2 D. None of these
1980	Question Image	
1981	ax+by+c = 0, represent a	A. circle B. parabola C. straight line D. quadratic circle
1982	The fifth term of an A.P. Whose first term is 5 and common difference is 3,is	A. 20 B. 17 C. 25 D. 30
1983	Decimal part of irrational number is	A. Terminating B. Repeating only C. Neither repeating nor terminating D. Repeating and terminating
1984	Question Image	
1985	Three points whose position vector a,b,c are collinear	A. axb +b x c+ c x a = 0 B. a,b +b,c +c,a =0 C. a,|a xc| =0 D. a+b+c =0
1986	An infinite sequence has no	A. nth term B. Last term C. Sum D. None of these
1987	Question Image	A. cot x + c B. tan x + c C. -cot x + c D. -tan x + c
1988	A line segment whose end points lie on a circle is called the	A. Arc of the circle B. Centre of circle C. Chord of circle D. Radius of circle
1989	x = -1 is in the solution of the inequality	A. x + 5 < 0 B. 2x + 3 <u><</u> 0 C. x > 0 D. 2x + 3 > 0
1990	tan 294° =_____;	A. tan 24° B. -tan 24° C. cot 24° D. -cot 24°
1991	Which of the following does not represent absolute value of a vector	A. magnitude B. length C. norm D. number
1992	If the radius of a circle is increased by 1 then area of circle will be	A. π r2 B. π(r+1)2 C. π r2 +1

	area of circle will be	C. π12 +1 D. 2π (r+1)
1993	The period of|sin⁡2x| is	A. π/2 B. -π/2 C. π D. π/3
1994	Which is a proper rational fraction	
1995	Question Image	A. The law of sines B. The law of consines C. The law of tangents D. None of these
1996	A fixed point which lies on the axis of the cone is called its:	A. axis B. apex C. plane D. diameter
1997	Question Image	
1998	The value of cos(cos-1 1/2) is	A. 1/2 B. √3/2 C. -1/2 D. 1/√2
1999	Question Image	
2000	The middle term of $(x-y)^8$is	A. 25 x⁴y⁴ B. 70 x⁴y⁴ C. 120 x⁴y⁴ D. 97x⁴y⁴
2001	Question Image	A. Zero matrix B. Diagonal matrix C. Column matrix D. Scalar matrix
2002	The sides of a right angled triangle are in A.P The ratio of sides is	A. 1:2:3 B. 3:4:5 C. 2:3:4 D. 5:8:3
2003	If a plane passes through the vertex of a cone then the intersection is	A. an ellipse B. a hyperbola C. a point circle D. a parabola
2004	Question Image	
2005	If a > 0, b > 0, c > 0, then the roots of the equation $ax^2+ bx + c = 0$ are	A. Real and negative B. Non-real with negative real parts C. Real and positive D. Nothing can be said
2006	If$f(x) = 2x^3 + 1$ then$f^1(0)$ =	A. 0 B. 1 C. 6 D. None of these
2007	Question Image	
2008	The third term in the expansion of (1+2x) is	A. -2x2 B. -4x2 C. 2x2 D. 4x2
2009	Question Image	
2010	Question Image	A. similar images B. distinct images C. similar range D. option a and c
2011	Question Image	A. 3 sec²x B. 3 sec²3x C. sec²3x D. sec²x
2012	Question Image	
2013	8 . 7 . 6. 5 in factorial form is	
2014	Out of 40 consecutive natural numbers, two are chosen at random. Probability that the sum of the numbers is odd, is	A. 14 / 29 B. 20 / 39 C. 1 / 2 D. n

2015	Shifting origin to (-4,-6), the new coordinates of (-6,-8) are:	A. (-1,2) B. (-2,-2) C. (1,-2) D. (3.-2)
2016	The statement that a group can have more than one identity elements is	A. True B. False C. Fallacious D. Some times true
2017	If n is not natural number, then the expansion $(1 + x)^n$ is valid for	
2018	Question Image	
2019	$x^3 + 2x^2 - 3x + 5$ is _____	A. An equation B. A polynomial C. Proper rational fractions D. Improper rational fractions
2020	The domain of the function y = sin x , is	A. $-\pi/2 \leq x \leq \pi/2$ B. $\pi/ \leq x \leq \pi$ C. $-2\pi \leq x \leq 2\pi$ D. $-1 \leq x \leq 1$
2021	graph of trigonometric function y = sec x does not meet	A. x - axis B. y -axis C. both axis D. None of these
2022	The position vector of the point P(a, b, c) is	
2023	If w+w2 is a root of (x+1)(x+2)(x+3)(x+4) = k, then	A. k=0 B. k=1 C. k=w D. k=w2
2024	Question Image	A. Right angled B. Obtuse angled C. Isosceles D. Equilateral
2025	The tangents drawn from the point P to a circle are real and distinct if	A. P is on the circle B. P is inside the circle C. P is outside the circle D. none of these
2026	Question Image	A. 1700 B. 17023 C. 17027 D. 17010
2027	Question Image	A. 3/4 B. r C. v D. None of these
2028	Question Image	
2029	A function f(x) is said to be the periodic function if for all x in the domain of f, there exists a smallest positive number p such the f(x + p) = _____	A. f(p) B. f(x) C. f(o) D. None of these
2030	Question Image	
2031	$(fog)'(x) = f'(g(x))g'(x)$ is derivative by	A. Chain rule B. Reciprocal rule C. Power rule D. Product rule
2032	The proposition S(n) is true $\forall n \in N$,S(k+1) true when _____is true	A. S(1) B. Both a & c C. S(k) D. None
2033	Question Image	
2034	$\sqrt{11}$ is	A. an irrational number B. Rational number C. odd number D. Negative number
2035	The set of rational number is represented by	A. W B. R C. Q' D. Q

2036	If p is false, -p is	A. True B. Not true C. Equal to p D. Conjunction
2037	The set {1, -1, i, -i}	A. Form a group w.r.t addition B. Form a group w.r.t multiplication C. Does not form a group w.r.t multiplication D. Not closed under multiplication
2038	If A = {2m/m^3= 8 , m€ Z} then A =	A. {1,8,27} B. {4} C. (2,4,6} D. {2,16,54}
2039	Which of the following sets is finite	A. The set of natural numbers between 3 and 10 B. The set of rational numbers between 3 and 10 C. The set of real numbers between 0 and 1 D. The set of rational numbers between 0 and 1
2040	A vertical pole is 8m high and the length of its shadow is 6m. The angle of elevation of the sun of the moment is	A. 57 B. -48 C. 27 D. 53
2041	Question Image	
2042	$Tan^{-1}1/x$ = _____	A. sin x B. sec⁻¹X C. cot⁻¹X D. None of these
2043	A polynomial P(x)has a factor (x-a)if P(a) =	A. a B. x C. 1 D. 0
2044	Question Image	D. none of these
2045	Question Image	A. Addition B. Subtraction C. Multiplication D. None of these
2046	Question Image	
2047	Question Image	
2048	If Sin A = sin B, cos A = cos B, then the value of A in terms of B is	
2049	Question Image	A. 0 B. 1 C. 2 D. none of these
2050	The point R dividing internally the line joining the points P(x_1, y_1) and Q(x_2, y_2) in the ratio K_1: K_2has the coordinates	
2051	The set {{a,b}} is	A. Infinite set B. Singleton set C. Two points set D. None
2052	If a and B are two matrices of the same order , then A+B=B+A , what is this property called:	A. associative B. additive C. commutative D. additive identity
2053	Question Image	A. x³⁹ B. 40x³⁹ C. 40x⁴¹ D. none of these
2054	If f:A→B is an injective function and second elements of no two of its ordered pairs are equal, then f is called	A. 1-1 and onto B. Bijective C. 1-1 and into D. None of these
2055	Question Image	A. x-axis B. y-axis C. z-axis D. None of these
2056	Question Image	D. none of these

2057	If a = [1,4,3] and B= [2,-1,5] athen the mid point M of AB is:	A. [1,1,1.5] B. [2,2,1.5] C. [1.5,1.5,4] D. None of these
2058	Question Image	A. Principle of equality of Fractions B. Rule for product of fraction C. Golden rule of fraction D. Rule of quotient of Fraction
2059	The domain of the principle cos function is	
2060	At a point 15 meters away from the base of a 15 meters high house, the angle of elevation of the top is	A. 90° B. 60° C. 30° D. 45°
2061	Question Image	A. a₁+ a₂ B. a²₁+ a²₂
2062	(A∩Bc)c= ----------	A. Ac∪Bc B. Ac∪B C. Ac∩B D. None of these
2063	The graph of y < 2 is the	A. Left half plane B. upper half plane C. Right half plane D. Lower half plane
2064	The function f(x) =|x| is a/an_____function	A. Even B. Odd C. Both even as well as odd D. Neither even nor odd
2065	One root of the equation cos x - x + 1/2 = 0 lies in the interval	
2066	Question Image	A. A = x, B = 1 B. A = 0, B = 2 C. A = -1, B = 1 D. A = x-1, B = x+1
2067	The graph of the quadratic equation is	A. Straight line B. Circle C. Parabola D. elipse
2068	Question Image	
2069	∀x,y∈R and x> 0 , y>0, if x > y	D. None of these
2070	Out of 10, 000 families with 4 children each, the number of families all of whose children are daughters is	A. 375 B. 500 C. 625 D. 150
2071	Question Image	A. 28 / 81 B. 28 / 243 C. 81 / 28 D. 243 / 82
2072	IfΔABC is right, law of cosine reduce to	A. Law of sine B. Law of tangent C. Phthogorous theorem D. Hero's formula
2073	The root of the quadratic equation are	A. 3 B. 2 C. 1 D. 4
2074	Question Image	A. Lies between 4 and 7 B. Lies between 5 and 9 C. Has no value between 4 and 7 D. Has no value between 5 and 9
2075	Question Image	A. 2²- n - 1 B. 1 - 2⁻ⁿ C. n + 2⁻ⁿ-1 D. 2ⁿ- 1
2076	The set of all points in the plane that are equally distant from a fixed point is called a	A. parabola B. ellipse C. hyperbola D. circle

2077	If x, y, z are the pth, qth, rth terms of an A.P. and also of G.P., then x^{y-z}. y^{z-x}. z^{x-y}eqals	A. xyz B. 0 C. 1 D. None of these
2078	Differentiating the equation $(x-1)(x-2)^3$ with respect to x gives.	A. 2x(x+2) B. 2(x-1) C. 2(x-1)(x+2) D. 3x(x+2)
2079	An integral of 1/x dx is:	A. 1/x² B. 1/-x² C. 1/lnx D. lnx
2080	If order of A is m x n, then order of $A^t$is	A. m x m B. n x n C. m x n D. n x m
2081	The sum of coefficients in the binomial expansion equals to	A. 2 B. 2ⁿ⁺¹ C. 2ⁿ⁻¹ D. 2ⁿ
2082	If (0, 0) and (1, 0) are the end points of a diameter, then the equation of the circle is	
2083	If the terminal rays of an angle falls on any axis then the angle is called	A. Allied angle B. Acute angle C. Standard position D. Quadrantal angle
2084	√2 +√3 +√5) = (√2 +√3 +√5: this property is called	A. associative property w.r.t addition B. commutative property C. Closure property w.r.t addition D. Additive identity
2085	cos 3a =_____;	A. 3sin a - 4sin3 a B. 4sin a - 3sin3 a C. 3cos3 a - 4cos a D. 4cos3a - 3cos a
2086	Question Image	
2087	Question Image	
2088	probability of a certain event is	A. 0 B. -1 C. 1 D. ∞
2089	The set of natural numbers is a subset of	A. {1, 2, 3, ... 100} B. The set of whole numbers C. {2, 4, 6, 8, ...} D. None of these
2090	Question Image	A. 2x - 3x + c C. x²- 3x + c
2091	Question Image	A. A B. B C. A'B' D. B'A
2092	Question Image	
2093	Which of the following is factor of x11+a11, where n is an odd integer	A. x-a B. x+a C. 2x-a D. 2x+a
2094	If$_e$> 1 , then the conic, is:	A. Ellipse B. Parabola C. Hyperbola D. None of these
2095	Question Image	A. 30° B. 45° C. 60° D. 90°
2096	Question Image	
2097	Question Image	A. 0 B. 1 D. none of these

2098	If two matrices have the same order and if their corresponding elements are also equal, then the matrices are	A. idempotant B. nilpotant C. indentity D. None of these
2099	Question Image	A. p < r B. p > rr C. p + r < 0 D. p - r < 0
2100	Number of selections of n different things out of n	A. 1 B. nPr C. n! D. nPr
2101	A subset of set of complex number whose elements are of the form (a,0) is called	A. Real number B. Complex number C. Rational number D. Irrational number
2102	A rectangular hyperbola whose centre is C is cut by any circle of radius r in four points P, Q, R and S. Then $CP^2+ CQ^2+ CR^2+ CS^2=$	A. r² B. 2 r² C. 3 r² D. 4 r²
2103	The 5th term of $(3a-2b)^{-1}$ is	A. 77b²/a⁵ B. 16b²/243 a⁵ C. 17b⁴/43a⁵ D. 25b³/43a⁵
2104	Let A is a 3 x 3 matrix and B is its adjoint matrix. If |B| = 64, then |A| =	
2105	If a tangent line touches the function y = f (x) in more than one point then y = f (x) is	A. Periodic B. Surjective C. Bijective D. Injective
2106	The function discontinuous at x = 0 is (1) tan x (II) cot x (III) sec x (iv)cosec x)	A. I & III B. I & IV C. II & IV D. II & III
2107	The identity function is	A. surjective B. injuctive C. bijective D. into
2108	The radius of the circle $2x^2 + 2y^2 - 4x + 12 y+11=0$ is:	A. √4.5 B. √11 C. √29 D. √15
2109	Domain of $\cos\theta$is	A. Set of odd numbers B. Set of integers C. Set of real numbers D. Set of complex numbers
2110	The discriminant of the quadratic equation $ax^2+ bx + c = 0$ is	A. b²+ 4ac B. b²- 4ac C. 4ac - b² D. a²- 4ac
2111	The end points of the major axis of the ellipse are called its	A. Foci B. Vertices C. Co - vertices D. None of these
2112	Question Image	A. 2 C. -2 D. none of these
2113	The distance of point P(x,y) from focus in a parabola $y^2 =4ax$, is:	A. 2a B. a C. x + a D. x-a
2114	IfΔABC is right, law of cosine reduce to	A. Law of sine B. Law of tangent C. Phthogorous theorem D. Hero's formula
2115	Question Image	A. - cos x B. sin x C. - sin x D. sec x
		A. a²+ b²=5

2116	If distance of (a,b) from origin is 5 then	B. a = 5 C. b = 5
2117	Question Image	
2118	Question Image	A. 4A - 3I B. 3A - 4I C. A - I D. None of these
2119	Question Image	A. hypothesis B. implication C. consequent D. antecedent
2120	(x-1) is a factor of	A. 2x³-3x²+9 B. 2x³-5x-8 C. 48x²⁻46x-9 D. x⁹-1
2121	The conic ax2+2hxy+by2+2gx+2fy+c= 0 never represent a circle if	A. a≠ b,h≠0 B. a=b C. h≠0 D. h=0
2122	The multiplicative inverse of 1 is	A. 1 B. -1 C. 0 D. Does not exist
2123	The number of divisors of 1029, 1547 and 122 are in	A. A.P. B. G.P. C. H.P. D. None of these
2124	Question Image	
2125	Deduction is mostly used in	A. elementary mathematics B. natural science C. higher mathematics D. medicine
2126	Question Image	A. I quadrant B. II quadrant C. III quadrant D. IV quadrant
2127	Question Image	
2128	Question Image	A. 0 B. 1 C. -1 D. 2
2129	If |αi + (α+1)j +2k| =3 then value of α is	A. 1,2 B. -1,-2 C. 1,-2 D. -1,2
2130	If eccentricity of ellipse becomes zero then it takes the form of	A. A parabola B. A circle C. A straight line D. None of these
2131	Question Image	A. Y = -x log x -x + c B. Y = x log x + x C. Y = x log x - x + c D. None of these
2132	The statement that a group can have more than one identity elements is	A. True B. False C. Fallacious D. Some times true
2133	6 is	A. A prime integer B. An irrational number C. A rational number D. An odd integer
2134	Question Image	A. cos 2x B. 2 cos 2x C. 2 sin2x D. -2 cos2x
		A. 2π B. 3<span style="font-family: "Times New Roman"; font-size: 24px; color:

2135	Tangent is a periodic function and its period is _____	rgb(34, 34, 34); text-align: center; background-color: rgb(255, 255, 224);">π C. π D. 4π
2136	The point of concurrency of the right bisectors of the sides of a triangle is called	A. incentre B. circum center C. e-center D. centroid
2137	Question Image	A. 1777 B. 223 C. 257
2138	Question Image	
2139	3j . k x i	A. 0 B. 1 C. 3 D. 9
2140	If u = xi + yj, then|u|	A. x² + y² B. (x² +y²)² C. x²-y² D. √(x²+y²)
2141	A non-terminating non_recurring decimal represents an	A. Irrational no B. Both a & c C. Rational no D. None of these
2142	O is _____	A. A positive integer B. A negative integer C. A natural number D. An integer
2143	The geometrical representation of a linear function is	A. Circle B. Parabola C. Straight lie D. None of these
2144	the value of 25π/36 in degrees is	A. 120^o <!--[endif]--><o:p></o:p> B. 125^o C. 60^o D. 115^o
2145	If z_1 = (a,b), z_2=(c,d), then z_1 z_2 = ----------	A. (ac,bd) B. (ac+bd, ad-bc) C. (ac-bd , ad+bc) D. (ac-bd , ad-bc)
2146	If z_1= 2 + 6i and z_2= 3 + 7i, then which expression defines the product of $z_1$and z_2?	A. 36 + (-32)i B. -36 + 32i C. 6 + (-11)1 D. 0, +(-12)i
2147	Question Image	A. 0 B. 1 C. 8 D. ∞
2148	Trival solution of homogeneous linear equation is	A. (0, 0, 0) B. (1, 2, 3) C. (1, 3, 5) D. a, b and c
2149	If C is the mid point of AB and P is any point outside AB, then	
2150	In a school there are 150 students Out of these 80 students enrolled for mathematics class.50 enrolled for English class and 60 enrolled for Physics class The student enrolled for English cannot attend any other class but the students of mathematics and Physics can take two courses at a time find the number of students who have taken both physics and mathematics.	A. 40 B. 30 C. 50 D. 60
2151	$\pi$is the period of the function	A. |sin x| + |sin x| B. sin⁴x + cos x C. sin (sin x) + sin (cos x) D. None of these

2152	Circle $x^2 + y^2 - 2y - y = 0$ and $x^2 + y^2 - 8y - 4 = 0$:	A. Interesect B. touch externally C. touch internally D. do not touch
2153	The positive integer just greater than $(1+0.0001)^{10000}$ is	A. 4 B. 5 C. 2 D. 3
2154	When the angle between the ground and the sun is 30□,flag pole costss a shadow of 40 mg long. the height of the top of the flag is	A. 25m B. 23m C. 12m D. 29m
2155	{1, 2, 3, 4,.....} is set of _____	A. Natural numbers B. Whole numbers C. Integers D. Rational numbers
2156	Question Image	
2157	A and B be two square matrices and if their inverse exist, the $(AB)^{-1}$=	A. A⁻¹B⁻¹ B. AB⁻¹ C. A⁻¹B D. B⁻¹A⁻¹
2158	Question Image	A. 30° B. 45° C. 60° D. 120°
2159	The vertex of the equation $y^2 = 4ax$ is:	A. (2, -2) B. (1,1) C. (0 , 0) D. (2 , 2)
2160	The points (0,-1), (2,1),(0,3) and (-2,1) are the corner of:	A. Square B. rhombus C. Parallelogram D. rectangel
2161	The circle with are 60 cm^2 has an arc 8 cm long. The angle that is subtended at the centre of the circle by the are is	A. 1.83 radians B. 2.1 radians C. 1.05 radians D. 1.25 radians
2162	If Z_1= 1 + i, Z_2= 2+3i, then $\|Z_1 - Z_2\|$ = ?	
2163	$d/dx(x^3 + 2x + 3)$=	A. x²+ 2 B. 3x + 2 C. 3x²+ 5 D. 3x2 + 2
2164	The eccentricity of the parabola y^2= -8x is	A. -2 B. 2 C. -1 D. 1
2165	If a,βare the roots of the equation x2 - 8x + p = 0 and a2 + β2= 40,then value of p is	A. 8 B. 12 C. 10 D. 14
2166	The probability that a person A will be alive 15 years hence is 5/7 and the probability that another person B will be alive 15 years hence is 7/9. Find the probability that both will be alive 15 years hence	A. 4/63 B. 5/9 C. 45/49 D. None of these
2167	The solution set of trigonometric equation contains	A. one element B. two elements C. three elements D. Infinite elements
2168	If p and q are two statements then their biconditional 'p if q' is denoted by	
2169	In R the right cancellation property w.r.t. addition is	
2170	The transpose of a zero matrix is a _____	A. Column matrix B. Zero matrix C. Row matrix D. Scalar matrix
		A. a=b and c =d B. a = d and b = c

2171	(a,b) = (c,d) if and only if	B. a = d and b = c C. a = c and b = d D. a - b = c -d
2172	Question Image	
2173	Question Image	A. a cosec(ax + b) + c B. - a cosec(ax + b) + c
2174	The common point to four standard parabolas	A. Focus B. Centre C. Vertex D. P(x,y)
2175	Question Image	D. none of these
2176	For any two sets A and, A ⊆ B if	A. x ∈ A ⇒ x ∈ B B. x ∉ A ⇒ x ∉ B C. x ∈ A ⇒ x ∉ B D. None of these
2177	A chord passing through the centre of the circle is called	A. the secant of the circle B. the tangent of the circle C. the arc of the circle D. the diameter of the circle
2178	The line y = 4x + c touches the hyperbola x^2-y^2= 1 if	
2179	Question Image	
2180	Question Image	A. 0 B. -4 D. none of these
2181	Question Image	
2182	The set {-1, 1} is	A. Group under the multiplication B. Group under addition C. Does not form a group D. Contains no identity element
2183	Question Image	
2184	The equation of the circle wit (-1, 1) and radius 2 is	
2185	The equation |x + 4| = x has solution	A. x = -2 B. x = 2 C. x = -4 D. x = 4
2186	If n is any positive integer then 3 + 6 + 9 + ...+ 3n = _____	
2187	Question Image	A. bijective function B. into function C. onto function D. surjective
2188	Question Image	
2189	Question Image	A. 1 B. 2 C. 3 D. None of these
2190	Question Image	
2191	Question Image	A. 0 B. 90° C. 180° D. 360°
2192	I f the focus is F (0,-a) and directrix is the line v=a, then equation of the parabola is:	A. x² = 4ay B. y² = 4ax C. y² = -4ax D. x² = 4ax
2193	Question Image	A. x = f(y) B. y = f(x) C. x = f(x) D. y = f(y)
2194	The first three terms in the expansion of $(1 + x)^{-1}$ are	A. 1 + x + x² B. 1 - x - x² C. -1 -x + x²

		D. 1 - x + x²
2195	A person standing on the bank of a river finds that the angle of elevation of the top of a tower on the opposite bank is 45°. then which of the following statements is correct?	A. Breadth of the river is twice the height of the tower B. Breadth of the river an the height of the tower are the same C. Breadth of the river is half of the height of the tower D. None of these
2196	A relation in which the equality is true only for some values of the known is called _____	A. An identity B. An equation C. A polynomial D. None of these
2197	Cos-1 (-x) =	A. -x B. 1/x C. tan-1 x D. π-cos-1 x
2198	d/dx (cos x^2) =	A. -2x cos x B. -2x sin x² C. -2x tan x D. -2x sec² x
2199	If x>0 and y<0, then cosθ	A. Positive B. negative C. zero D. infinity
2200	The distance of a moving particle at any instant t is x = 3t2 +1 then velocity of particle at t = 10 is	A. 50 cm/sec B. 60 cm/sec C. 61 cm/sec D. None of these
2201	The middle term in the expansion of $(a+x)^{12}$is	A. 7th B. 8th C. 9th D. 6th
2202	The general equation of circle $x^3 + y^3 + 2gx + 2fy + c = 0$, contains:	A. Three independent variables B. Two independent conntants C. Three indepentent parameters D. Three independent constants
2203	Six boys and 3 girls are to be seated at random, in a row, for a photograph. The probability that no two girls will sit together is	A. 1/12 B. 1/6 C. 5/12 D. 7/12
2204	if one root of the equation ix2 - 2(i + 1) x +(2 - i)= 0 is 2 - i then the other root is	A. -i B. 2 + i C. i D. 2 - i
2205	In a quadratic equation with leading co-efficient 1, a student reads the co-obtain the roots as -15 and -4. The correct roots are	A. 6, 10 B. -6, -10 C. 8, 8 D. -8, -8
2206	Question Image	D. none of these
2207	If you are looking a high point from the ground, then the angle formed is	A. Angle of elevation B. Angle of depression C. Right angle D. Horizon
2208	The projection of -2i + 3j+7k on 2j + k is	A. 13/5 B. 13/4 C. 13/ square 5 D. 13
2209	The measure of the angle subtended at the centre of the circle by an arc, whose length is equal to the radius of the circle is	A. 1⁰ B. 1' C. 1" D. 1 rad
2210	Question Image	
2211	In one hour, the hour hand of a clock turns through	
2212	For two events A and B if P(A) = P (A/B) = 1/4 and P(B/A) = 1/2, then	A. A is sub-event of B B. A and B are mutually exclusive C. A and B are independent and P(A/B) = 3/4 D. None of these
2213	Which of the following notation defines AxB	
2214	Question Image	A. Commutative law of multiplication B. Closure law of multiplication

2214	Question Image	C. Associative law of multiplication D. Multiplication identity
2215	Question Image	
2216	The product of complex numbers (a,b) and (c,d) is	A. (ac, bd) B. (ac-bd, ad+bc) C. (ab,cd) D. (ac+bd,ad-bc)
2217	Question Image	A. 2 x 2 B. 2 x 3 C. 3 x 2 D. 3 x 3
2218	A relation in which the equality is true for all values of the unknown is called _____	A. An identity B. An equation C. A polynomial D. None of these
2219	Tangent is .....function	A. Inverse B. one-one C. in-to D. Periodic
2220	A sequence whose reciprocal is an A.P is called	A. Oscillator B. H.P C. G.P D. None of these
2221	Question Image	A. 1 B. -1
2222	Every recurring decimal represents	A. A natural number B. A rational number C. An irrational number D. A whole number
2223	Question Image	
2224	The angle of elevation of the top of a tree from a point 17 meters from is foot is 42□The height of the tree is	A. 12m B. 21m C. 17m D. 15m
2225	The familiar plane curves, namely circle, ellipse, parabola and hyperbola are called:	A. cones B. conics C. nappes D. apex
2226	Question Image	C. 16 D. None of these
2227	120° degrees are equal to how many radians?	
2228	A cone is generated by all lines through a fixed point and the circumference of	A. a Circle B. an ellipse C. a Hyperbola D. None of these
2229	All men are mortal, We are men, there fore, we are also mortal. This is a useful example of	A. Deduction B. Induction C. Conjuction D. disjunction
2230	Question Image	
2231	Question Image	
2232	The set of first elements of the ordered pairs in a relation is called its	A. domain B. range C. relation D. function
2233	The set of months in a year beginning with S.	A. {September, October, November} B. Singleton set C. Null set D. Empty set
2234	A square matrix A for which A^t= A is called a	A. Column matrix B. Symmetric matrix C. Skew-symmetric matrix D. Row matrix
2235	If a,b = 0 then	A. a |b B. a||b C. a = b D. None

		D. None
2236	The set {Z\ {0} } is group w.r.t	A. Addition B. Multiplication C. Division D. Subtraction
2237	The equation of the circle with centre origin and radius r is	A. x²+ y²= 1 B. x²+ y²= r² C. x²+ y²= 0 D. x²- y²= r²
2238	Question Image	A. 2x B. 3x² C. 1 D. 0
2239	Question Image	
2240	If f(x) = x^2- x then f(-2) is	A. 4 B. 6 C. 2 D. 0
2241	Question Image	A. Even B. Odd C. Prime D. None of these
2242	The value of $\sin^{-1}$ 5/13 is equal to	A. Cos 5/13 B. Tan⁻¹ 5/12 C. cos⁻¹5/12 D. 2 cos⁻¹4/5
2243	Two tangents drawn from (2,3) to the circle x2+y2 =9 are	A. Real and distinct B. Imaginary C. Real and coincident D. None of these
2244	Question Image	A. Rational B. Irrational C. Even D. Odd
2245	A = B if	D. A is equivalent to B
2246	Tan 360° = _____	A. -1 B. 0 C. 1 D. Undefined
2247	The exact value of $\cos^{-1}$ (-1) + $\cos^{-1}$ (1) =	A. π B. -π C. π/2 D. π/3
2248	The value of 289^oin radians is	A. 4.05 B. 3.02 C. <!--[if gte msEquation 12]><m:oMathPara><m:oMath><m:r>o</m:r></m:oMath></m:oMathPara><![endif]--><!--[if !msEquation]--><!--[if gte vml 1]><v:shapetype id="_x0000_t75" coordsize="21600,21600" o:spt="75" o:preferrelative="t" path="m@4@5l@4@11@9@11@9@5xe" filled="f" stroked="f"> <v:stroke joinstyle="miter"/> <v:formulas> <v:f eqn="if lineDrawn pixelLineWidth 0"/> <v:f eqn="sum @0 1 0"/> <v:f eqn="sum 0 0 @1"/> <v:f eqn="prod @2 1 2"/> <v:f eqn="prod @3 21600 pixelWidth"/> <v:f eqn="prod @3 21600 pixelHeight"/> <v:f eqn="sum @0 0 1"/> <v:f eqn="prod @6 1 2"/> <v:f eqn="prod @7 21600 pixelWidth"/> <v:f eqn="sum @8 21600 0"/> <v:f eqn="prod @7 21600 pixelHeight"/> <v:f eqn="sum @10 21600 0"/> </v:formulas> <v:path o:extrusionok="f" gradientshapeok="t" o:connecttype="rect"/> <o:lock v:ext="edit" aspectratio="t"/> </v:shapetype><v:shape id="_x0000_i1025" type="#_x0000_t75" style='width:6pt; height:14.25pt'> <v:imagedata src="file:///C:/Users/Softsol/AppData/Local/Temp/msohtmlclip1/01/clip_image001.png" o:title="" chromakey="white"/> </v:shape><![endif]--><!--[if !vml]--><img width="8" height="19" src="file:///C:/Users/Softsol/AppData/Local/Temp/msohtmlclip1/01/clip_image002.png" v:shapes="_x0000_i1025" style="font-family: Calibri, sans-serif; font-size: 11pt;"><img width="9" height="19" src="file:///C:/Users/Softsol/AppData/Local/Temp/msohtmlclip1/01/clip_image002.png" v:shapes="_x0000_i1025" style="font-family: Calibri, sans-serif; font-size: 11pt;">π/2<!--[endif]--><!--[endif]--><o:p></o:p> <!--[endif]--><o:p></o:p> D. 5.04
2249	Given matrices A =$\|a_y\|$and B=$\|b_y\|$,and b and c are real number,then (b+c)A=	A. bB+cB B. bA+cB C. bB+cA D. bd+cd

2250	Question Image	
2251	If m and n be two scalars, then (m+n) g =	A. 0 B. m+n<img width="9" height="20" src="file:///C:/Users/Softsol/AppData/Local/Temp/msohtmlclip1/01/clip_image002.png" v:shapes="_x0000_i1025"> <!--[endif]--><o:p></o:p> C. m_a+n_a D. ma - m_a <!--[endif]--><o:p></o:p>
2252	Which symbolic notation represent unary operation ?	A. - B. ∨ C. ∧ D. ⇔
2253	Question Image	
2254	Question Image	A. (a + b)c = a . c + bc B. a + b = b + a C. (a + b) + c = a + (b + c) D. a(b+ c) = ab + ac
2255	Shifting origin to (1,-2), the new coordinates of (4,5) are:	A. (3,7) B. (5,3) C. (-3,7) D. (3,-7)
2256	For all points (x,y) in third quadrant	A. x > 0 , y < 0 B. x > 0 , y > 0 C. x < 0 , y < 0 D. x < 0 , y > 0
2257	If $f(x) = -x^2$then f(-2) is	A. -2 B. 2 C. -4 D. 4
2258	Question Image	D. None of these
2259	Question Image	
2260	Question Image	A. 0 B. 1 D. -1
2261	If $\sin\theta$and $\cos\theta$are the roots of the equation ax^2- bx + c = 0, then a, b, c satisfy the relation	A. b²- a²= 2ac B. A²- b²= 2ac C. A²+ b²= c² D. B²+ a²= 2ac
2262	Question Image	A. 2 D. 0
2263	Question Image	A. 0 B. 1
2264	Question Image	
2265	f(x) = 1 is	A. identity function B. constant function C. linear function D. quadratic function
2266	Question Image	
2267	Question Image	
2268	To each element of a group there corresponds ..... inverse element	A. Two B. One C. No D. Three
2269	The law of tangents is _____	
2270	A function from A to B is denoted by	A. f: A→ B B. f: B → A C. f: → A :B D. f → A→ B
2271	Range of 3 cot x is _____	A. [-1, 1] B. [-3, 3] C. R D. None of these
2272	The set of the first elements of the orders pairs forming a relations is called its	A. Relation in B B. Range C. Domain D. Relation in A

		D. Relation in A
2273	The foot of perpendicular from (α,β,γ) only y-axis is	A. (α, 0, 0) B. (0,β, 0) C. (0, 0, γ) D. (0, 0, 0)
2274	For trival solution |A| is	A. A B. |A| is non zero C. A = 0 D. None of these
2275	If f(x) = x^2then f(0) is	A. 0 B. 1 C. 2 D. none of these
2276	What is the 26th term of the sequence, if its general term is $a_{n} = (-1)^{n+1}$	A. 2 B. 26 C. 27 D. 1
2277	Question Image	C. 0 D. 1
2278	If A and B are skew-symmetric then (AB)t is	A. At Bt B. AB C. -AB D. BA
2279	Question Image	A. 4(x³- 3x²)³+ c B. 3x²- 6x + c
2280	The multiplicative inverse of 4 is	A. -4 B. -1/4 C. 1/4 D. 1
2281	Question Image	
2282	The range of y=x2 + 1 is the set of non-negative real numbers except	A. 0≤ y < 1 B. 0 < y < 1 C. 0≤ y≤ 1 D. 0 < y≤1
2283	The equation of motion of a stone thrown vertically up wards is s = ut - 4.9$t^2$the maximum height attained by it =	
2284	Question Image	A. 1 B. 9 C. 3 D. 5
2285	I f a =5i + 2j, then|a| =	A. √13 B. √7 C. 1/√13 D. √29
2286	Question Image	A. Identity matrix B. Diagonal matrix C. Null matrix D. Hermitian matrix
2287	Question Image	D. None of these
2288	Question Image	A. z is purely imaginary B. a is any complex number C. z is real D. None of these
2289	(√3+√5)+√7 = √3 +(√5 +√7) property used in above is	A. Commutative property of addition B. Closure property of addition C. Additive inverse D. Associative property w.r.t to adition
2290	Question Image	A. Natural numbers B. Whole numbers C. Integers D. Rational numbers
2291	If x - 1 is a factor of x4 - 5x2 + 4 then other	A. (x + 2)2(x - 1) B. (x + 2)(x - 1)2

2291	factor is	C. (x+2)(x2- x- 2) D. (x + 2)2(x - 1)2
2292	If the roots of $ax^2+ bx + c = 0$ (a > 0) be greater than unity, then	A. a + b + c = 0 B. a + b + c > 0 C. a + b + c < 0 D. None of these
2293	If A is skew Hermitian Matrix then which of the following is not skew Hermitian matrix	A. A2 B. A5 C. A3 D. A7
2294	$\cos\theta/2=$	
2295	Question Image	A. 110 B. 220 C. 1320 D. None of these
2296	∀a,b ε R, ab = be is a	A. Commutative law of multiplication B. Closure law of multiplication C. Associative law of multiplication D. Multiplicative identity
2297	The multiplicative inverse of x such that x = 0 is	A. -x B. does not exist C. 1/x D. 0
2298	The domain of y = cos-1 x is	A. -∞ < x < ∞ B. -1≤ x≤ 1 C. x≤ -1 or x ≥ 1 D. None of these
2299	Question Image	
2300	If the cutting plane is slightly tilted and cuts only one nappe of the cone, the resulting section is	A. an ellipse B. a circle C. a hyperbola D. a parabola
2301	Question Image	A. At B. -A C. A D. A-1
2302	The largest possible domain of the function: $y=\sqrt{(x)}$ is:	A. (0 ,∞) B. 12 C. (3 , 12) D. (3 ,∞)
2303	u,v,wand u x (v.w) are	A. Equal B. Parallel C. Additive immense of each other D. Meaningless
2304	Multiplicative inverse of "1" is	A. 0 B. -1 C. 1 D. {0, 1}
2305	The transport of a square matrix is a	A. Row matrix B. Column matrix C. Square matrix D. Null matrix
2306	Two matrices A and B are conformable for the product AB if	A. Both A and B are square B. Both A and B are symmetric C. Number of rows of A = number of columns of B D. Number of columns of A = number of rows of B
2307	If A is a subset of B and B contains at least one element which is not an element of A, then A is said to be	A. Improper subset of B B. Super set of B C. Proper subset of B D. None of these
2308	If a is any real number and a = a is called	A. symmetric property B. Trichotomy Properties C. Transitive Property D. Reflexive Properties
2309	r + 3 >5 then which is true	A. r + 2 > 4 B. r + 2 < 4 C. r + 2 = 4 D. None

2310	A square matrix A = [aij] is lower triangular matrix when	A. aij = 0 for all i<j B. bij = 0 C. cij = 0 D. dij = 0
2311	Question Image	
2312	Question Image	
2313	The coefficient of x^{10} in the expansion $(x^3+3/x^2)^{10}$ is	A. 1700 B. 17023 C. 17027 D. 17010
2314	A triangle which is not right is called an _____ triangle	A. Acute B. Obtuse C. Oblique D. None of these
2315	For any equilateral r :R :η :r1 :r2 :r3 =	A. 1:2:3:4:5 B. 1:2:3:3:3 C. 1:2:4:4:4 D. 2:1 :2 :2 :2
2316	The equation of the directrix of the parabola x^2= 4ay is	A. x + a = 0 B. x - a = 0 C. y + a = 0 D. y - a = 0
2317	Question Image	A. I and II quadrants B. I and III quadrants C. II and III quadrants D. II and IV quadrants
2318	If one end of the diameter of the circle $x^2 + y^2$- 5x = 3y -22 = 0 is (3,4) the other end is:	A. (2,7) B. (-2,-7) C. (-2,7) D. (2,-7)
2319	Question Image	
2320	The property used in -3 <-2 ⇒0 <1	A. Commutative property B. Additive property of inequality C. Additive inverse D. Additive identity
2321	Question Image	
2322	If S = {3,6,9,12.....}, then	A. S = Four multiples of 3 B. S = Set of even numbers C. S = Set of prime numbers D. S = All multiples of 3
2323	The set of complex numbers forms	A. Commutative group w.r.t addition B. Commutative group w.r.t multiplication C. Commutative group w.r.t division D. Non commutative group w.r.t addition
2324	Question Image	
2325	Question Image	
2326	Let a_1, a_2, a_3, $a_4$and $a_5$be such that a_1, a_2, and $a_3$are in A.P., a_2, $a_3$and $a_4$are in G.P and a_3, $a_4$and $a_5$are in H.P. Then, a_1, $a_3$and $a_5$are in	A. G.P. B. A.P. C. H.P. D. None of these
2327	Any horizontal line divided the plane into	A. Left half plane B. Upper and lower half planes C. Infinite number of horizontal liens D. None of these
2328	Two unbiased dice are thrown. The probability that the total score is > 5 is	A. 1 / 18 B. 7 / 18 C. 13 / 18 D. 11 / 18
2329	The sum of the cubes of three consecutive natural number is divisible by	A. 9 B. 6 C. 5 D. 10
2330	Question Image	D. none of these
2331	G is geometric mean between a and b if a, G, b is	A. A.P. B. G.P. C. H.P.

		D. None of these
2332	Range of cot x is _____	A. [-1, 1] B. R C. Negative real numbers D. R - {x | - 1 < x < 1}
2333	The value of 300^{o} in term ofπ is	A. 5π/3 B. 2π/3 C. 5π/2 D. 5π
2334	Question Image	A. Only one real solution B. Exactly three real solution C. Exactly one rational solution D. Non-real roots
2335	One degree is denoted by	A. 1⁰ B. 1' C. 1" D. 1 rad
2336	The set { {a,b} } is	A. Infinite set B. Singleton set C. Two points set D. Empty set
2337	Question Image	A. 0 B. -1 C. 1
2338	y=-a is the equation of the directrix of	A. y2 =4ax B. x2=-4ay C. x2=4ay D. y2=-4ax
2339	i =	
2340	Question Image	A. 2x + 2y B. 4 - x² C. -x/y D. x/y
2341	n!/(n-1)!=	A. n B. n! C. (n-1)! D. 0!
2342	If a_n= 2n -3, write the first four terms	A. -3, -1, 1, 3 B. 1, 3, 5, 7 C. -1, 1, 3, 5 D. None of these
2343	if the value of the sphere, v =4/3$\pi r^{2,}$ then the which of the following statement is true?	A. r is the function of v B. v is the function ofπ C. π is independent variable D. None of these
2344	If y=f(x) is a function then y is called	A. dependent variable B. independent variable C. constant D. none of these
2345	The graph of a quadratic function is	A. Circle B. Straight line C. Parabola D. Triangle
2346	The roots of the equations will be equal if b^{2}-4ac is	A. Positive B. Negative C. 1 D. Zero
2347	The sum of the even coefficients in the expansion $(1 + x)^{n}$is	A. n² B. 2ⁿ⁻² C. 2ⁿ⁻¹ D. 2ⁿ
2348	w^{-12}= _____	A. 0 B. 1 C. w D. w²
2349	If y = sin (ax + b), then fourth derivative of y with respect to x =	A. a⁴cos (ax + b) B. a⁴sin (ax + b) C. -a⁴sin (ax + b) D. a⁴tan (ax + b)
2350	Question Image	D. None of these

2350	Question Image	D. None of these
2351	An indicated sum of terms of a sequence is represented by	A. Sn B. an C. S(n) D. {Sn}
2352	Question Image	
2353	The equation of the circle with centre (5, -2) and radius 4 is	A. (x-5)²+ (y+2)²= 16 B. (x-5)²+ (y+2)²= 4 C. (x-5)²+ (y-2)²= 16 D. (x-5)²+ (y-2)²= 4
2354	It is not possible to find the exact value of	A. π B. √9 C. ∛27 D. √1
2355	A vector with magnitude one is called	A. constant vector B. unit vector C. zero vector D. null vector
2356	The probability of getting a number between 1 and 100 which is divisible by 1 and itself if only is	A. 1 / 4 B. 1 / 2 C. 3 / 4 D. 25 / 98
2357	The minimum value of the quadratic function f(x) = 5 x 2-11,is	A. -11 B. 6 C. -7 D. 7
2358	Question Image	A. Additive property of inequality B. Commutative property C. Additive inverse D. Additive identity
2359	The equation x2+ y2- 8x+ 6y+ 25= 0 represents	A. A circle B. A pair of straight lines C. A point D. None of these
2360	Φset is the _____ of all sets?	A. Subset B. Union C. Universal D. Intersection
2361	Question Image	
2362	The number of points of intersection of two curves y = 2 sin x and y = $5x^2$+ 2x + 3 is	A. 0 B. 1 C. 2 D. None of these
2363	Question Image	B. 0 C. 1 D. undefined
2364	The period of the function csc x/4 us	A. 4x B. π/4 C. 8π D. π/8
2365	What is the period of 6 sin x=?	A. π B. -π C. π/2 D. 2π
2366	a chord passing through the focus of a parabola is called a:	A. Focal chord B. Latus rectum C. Tangent D. Directrix
2367	Question Image	A. -2x cos x² B. -2x²sin x² C. -x²sin x D. -2x²sin x²
2368	$Sin^{-1}(-x)$=	A. Cos⁻¹1/x B. - Sin⁻¹X C. Cot⁻¹X D. None of these
2369	If cosα= 4/5, then cosα/2	
		A. 2cosa cosß

2370	sin(a + β)+sin(a -β) =_____;	B. 2sina cosβ C. 2cosa sinβ D. -2sina sinβ
2371	How many term are there in the A.P, in which a_1 = 11 , a_n =68, d=3	A. 30 B. 27 C. 20 D. 21
2372	Question Image	A. A complex number B. A rational number C. A natural number D. An irrational number
2373	The set of cartesian product A x B consists of	A. Domain B. Range C. Binary relation D. Ordered pair
2374	If A⊆ B, and B is a finite set, then	A. n (a) < n(B) B. n(B)<(A) C. n(A)≤ n (B) D. n(A)≥ n(B)
2375	For all points (x,y) in first quadrant	A. x > 0 , y < 0 B. x > 0 , y > 0 C. x < 0 , y < 0 D. x < 0 , y > 0
2376	Question Image	A. 45° B. 30° C. 75° D. 60°
2377	Find a if 1 is a root of the equation x^2+ ax + 2 = 0	A. 3 B. -3 C. 2 D. 0
2378	If 3x4 +4x3+x5is divided by x+1 , which of the following is the remainder	A. 7 B. -2 C. 6 D. 1
2379	If y=f(x) is a function then x is called	A. dependent variable B. independent variable C. constant D. none of these
2380	In a country 55% of the male population has houses in cities while 30% have houses both in cities and in villages find the percentage of the population that has houses only in villages	A. 45 B. 30 C. 25 D. 50
2381	The additive identity of real number is	A. 1 B. 2 C. 1/2 D. 0
2382	If a,b,c are unit vectors then |a + b|2 +|a - b|2	A. 4 B. 8ab C. 9cos D. 4(a,b)
2383	f(x) = 2^x+ 3 . 2^{2x}+ 5 is	A. trigonometric function B. algebraic function C. exponential function D. logarithmic function
2384	The centroid of a triangle divides each median in the ratio	A. 2 : 1 B. 3 : 1 C. 3 : 2 D. 1 : 1
2385	To express a single rational fraction as a sum of two or more single rational fractions which are called	A. improper fractions B. Partial fractions C. mixed form D. Polynomials
2386	A line joining two distinct points on a parabola is called	A. Axis B. Directrix C. Chord D. Tangent
2387	Find the sum of the infinite geometric series 2 + 1 + 0.5 + ...	A. 3.5 B. 3 C. 4 D. None of these

2388	Question Image	
2389	Function is a special type of	A. relation B. ordered pairs C. cartesian product D. sets
2390	Range of sec x is _____	A. [-1, 1] B. R C. Negative real numbers D. R = {x | -1 < x < 1}
2391	Question Image	A. I andII quadrants B. II andIII quadrants C. III andIVquadrants D. none of these
2392	The solution set of x < 4 is	A. -∞< x < 4 B. -∞> x > 4 C. -∞< x < 2 D. -∞> x > 2
2393	The minimum value of the quadratic function f(x) = x2 +6x -2, is	A. 11 B. 6 C. -11 D. 13
2394	The center of the sphore which passes thro' (a, 0, 0), (0, b, 0), (0, 0, c) and (0, 0, 0) is	
2395	The function ø(x) is ananti derivativeof function f (x),x∈Df if	A. ø′(x) =∫f(x)dx B. ø(x) =∫f(x)dx C. ø′(x) =f(x) D. ø(x) =∫′(x)dx
2396	The roots of the equation x2 +6x-7=0,are	A. 1 B. 2 C. 1 and -7 D. -7
2397	sin2 π/6 + sin2 π/3 + tan2 π/4 =_____;	A. 1 B. 2 C. 3 D. 4
2398	The velocity of a particle moving along a straight line is given by v = 3t + t^2. The acceleration of the particle after 4 seconds from the start is	A. 4 B. 11 C. 26 D. None
2399	To draw conclusions from some expreiments or few contacts only is called	A. deduction B. implication C. conjunction D. induction
		A. 180°

2400	1 radian = _____	B. 90° C. 57.296° D. 60°
2401	If the roots of $ax^2 + b = 0$ are real and distinct then	A. ab > 0 B. a = 0 C. ab < 0 D. a > 0, b > 0
2402	Question Image	
2403	In R the number of identity elements w.r.t.'.' is	A. One B. Two C. Three D. Four
2404	(n + 2) (n + 1)n in factorial form is	
2405	w^{11}= _____	A. 0 B. 1 C. w D. w²
2406	(n + 2) (n + 1) n= _____	
2407	Question Image	A. π B. π/6 C. -π/2 D. 2π
2408	π is the ration of	A. Area of a circle to its diameter B. Area of a circle to its radius C. Circumference of a circle to its diameter D. Circumference of circle to its radius
2409	There are _____ types of rational fraction	A. Three B. Four C. Five D. Two
2410	Question Image	
2411	The period of the trigonometric function y = sin x cos x is	A. 2π B. π C. 4π D. π / 2
2412	The conditional statement "If p then q" is logically equivalent to the statement.	A. Not p or Not q B. Not p and Not q C. Not p or q D. p or q
2413	Question Image	
2414	The distance from the point P(3,4) to the line y = 2x - 3 is:	A. √5 B. √3 C. 2√3 D. 1/√5
2415	An A.P., a G.P. and a H.P. have the same first and last terms and the same odd numbers of terms, the middle terms of the three series are in	A. A.P. B. G.P. C. H.P. D. None of these
2416	Which of the following is a scalar.	A. electric field B. magnetic field C. weight D. mass
2417	Question Image	A. y/x B. x/y C. y/z D. None
2418	Question Image	A. [0, 0, 0] B. [1, 0, 0] C. [0, 1, 0] D. [0, 0, 1]
		A. 1

2419	In common logarithm the base is	B. 0 C. 10 D. e
2420	Question Image	A. 5 C. -5 D. none
2421	$_{e}$ is a	A. variable B. Positive constant C. Positive variable D. Directrix
2422	A conjunction is considered to he true only if both its components are	A. false B. equilvalent C. equal D. true
2423	*i* =	A. √1 B. √2 C. √-2 D. √-1
2424	Vector additon is:	A. Commutative B. Associative C. Commutative and Associative D. None of these
2425	How many 3 digit numbers can be formed by using each one of the digit 2, 3, 5, 7, 9 only once?	A. 15 B. 24 C. 60 D. 120
2426	The identity elements with respect to subtraction is	A. 0 B. 1 C. -1 D. Does not exist
2427	Which of the following has the same value as $¡^{113}$?	A. i B. -1 C. -i D. 1
2428	On simplifying the express in sin2O/1+Cos 2O the result is.	A. Sin O B. CotanO C. Tan O D. Sec O
2429	To each element of a group there corresponds _____ inverse element	A. Two B. One C. No D. Three
2430	Question Image	A. 1 D. -1
2431	The identity element of a set X with respect to intersection in P(x) is	A. X B. Does not exist C. ⌀ D. None of these
2432	The symbol ∃ stand for	A. Such that B. This implies that C. For all D. There exist
2433	The sum even binomial coefficient of (3+2x)5 is _____term	A. 16 B. 30 C. 8 D. 32
2434	Question Image	
2435	The value of p for which both the roots of the equation 4x2- 20x + (25p2+ 15 p - 66) = 0 are less than 2, lies in	
2436	AB is a vertical pole and C is its middle point. The end A is on the level ground and P is any point on the level ground other than A. the portion CB subtends and angle β at P. If AP : AB = 2 : 1 then β=	
2437	The coordinates of a point P(x,y) referred to XY-system are	A. (x+y,y+k) B. (x-h,y-k) C. (x,y)

		D. (x-h,y-k)
2438	Any conditional and its contrapositive are	A. Equilavant B. Opposite C. Equal D. Not Equal
2439	Question Image	
2440	If the trace of matrix A is 5, then the trace of the matrix 3A is	A. 3/5 B. 5/3 C. 8 D. 15
2441	A non-terminating, non-recurring decimal represent	A. A natural number B. A rational number C. An irrational number D. A prime number
2442	If A is any matrix, and r is a scalar, then (rA)'	A. r'A' B. r/A' C. 1/rA' D. rA'
2443	The zero vector is	A. [0, 0, 0] B. [1, 1, 1] C. [0, 1, 0] D. [0, 0, 1]
2444	The area of a sector with central angle of 0.5 radians in a circular region whose radius is 2m is	
2445	The cartesian system of coordinates was introduced by:	A. Eulaer B. Euclid C. Descrates D. Maclream
2446	The magnitude of vector a 2i-7j is	A. √23 B. √43 C. 3 D. √53
2447	Question Image	A. 15/23 B. 7/15 C. 7/8 D. 15/7
2448	If the vertex of the parabola is the origin and directrix is x+5 = 0 . then its latus rectum is:	A. 10 B. 5 C. 0 D. 20
2449	Question Image	
2450	The three consecutive numbers a,√ab,b are in	A. G.P B. H.P C. G.M D. None of these
2451	The differential equation of all st. lines which are at a constant distance to form the origin is	
2452	sec h x = _____	
2453	A function in which the second elements of the order pairs are distinct is called	A. Onto function B. One-one function C. Identity function D. Inverse function
2454	The additive inverse of 1 is	A. 1 B. -1 C. 0 D. Does not exist
2455	A prime number can be a factor of a square only if it occurs in the square at least	A. Once B. Thirce C. Twice D. None of these
2456	The second degree equation 2x2 -xy+ 5x -2y +2 =0 represents	A. Circle B. Hyperbola C. Ellipse D. Pair of straight lines
2457	In the expansion of $(a + x)^n$the sum of exponents of a and x in each term of the	A. n + 1 B. n - 1 C. n

	expansion is	D. 2n
2458	Question Image	
2459	Question Image	
2460	If 4 $^{6}P_{r}$= $^{6}P_{r+1}$, then r is equal to	A. 4 B. 3 C. 2 D. 1
2461	Question Image	A. Conclusion B. Implication C. Antecedent D. Hypothesis
2462	If the sum of co-efficient in the expansion of $(a+b)^{n}$is 4096, then the greatest co-efficient in the expansion is	A. 1594 B. 792 C. 924 D. 2924
2463	If cosθ = 9/41 and sinθ< 0, the tanθ =	A. 41/9 B. -40/9 C. 9/10 D. 3/20
2464	Question Image	
2465	Question Image	A. A = x, B = 1 B. A = 0, B = 2 C. A = -1, B = 1 D. A = x-1, B = x + 1
2466	f(x) = 3x/x^{2} + 1 is:	A. an even function B. an odd function C. an even and implicit function D. neither even nor a odd
2467	If f(x) = x^{3}- 2x^{2}+ 4x -1 then f(0) is	A. 0 B. 1 C. -1 D. none of these
2468	On simplifying the equation 1+cosx/1+sec x' the result is.	A. Sin x B. Cosec x C. Cos x D. Sec x
2469	Question Image	
2470	n different objects can be arranged taken all at a time in _____	A. (n + 1)! ways B. (n - 1)! ways C. n! ways D. n ways
2471	Question Image	A. a = 2, b = 3 B. a = 3, b = 2 C. a = 2, b = 1, 2 D. a = 3, b = 3
2472	Question Image	A. -a -b -c B. 1 C. 0 D. -1
2473	Express the perimeter P of square as a function of its area A?	A. P = 4√A B. P =√A C. P = 2A D. P =π√A
2474	Question Image	A. 0 B. 1 C. -1 D. None
2475	Area bounded between the curve xy=2 and the lines x=1 and x=2	A. ln2 square units B. ln√2 square units C. ln4 square units D. Square units
2476	tanθ/2	
2477	Which of the following integrals can be evaluated	
	p, q, r and s are integers. If the A.M. of the	A. q is an odd integer B. r is an even integer

2478	roots of x2- px + q2= 0 and G.M. of the roots of x2- rx + s2= 0 are equal, then	B. r is an even integer C. p is an even integer D. s is an odd integer
2479	The sum of the squares of three distinct real numbers, which are in G.P., is S^2. if their sum isαS then	
2480	Trival solution of homogeneous linear equation is	A. (0, 0, 0) B. (1, 2, 3) C. (1, 3, 5) D. a.b and c
2481	The transpose of a column matrix is a _____	A. Zero matrix B. Diagonal matrix C. Column matrix D. Row matrix
2482	Question Image	
2483	Three unbiased coins are tossed. Then the probabilities of getting two heads is	A. 3/8 B. 1/8 C. 1/4 D. None of these
2484	Question Image	
2485	a + x is _____	A. A trinomial B. A binomial C. A monomial D. None of these
2486	If p and q are two statements then their conjunction is denoted by	
2487	Cosec 60° = _____	
2488	Multiplying each side of an inequality by (-1) will:	A. Not effect B. Change the sign C. Become zero D. Not defined
2489	d/dx [$\tan^2$ x]	A. 2tan x sec² x B. 2tan x sec x C. 2 cot x tan x D. 2sec² x cos² x
2490	Question Image	A. 184 D. none of these
2491	Geometric mean between a and b is	
2492	Three points (-2,2) (8,-2) and (-4,3) are vertices of a :	A. Isosceles triangle B. right-angled triangle C. Equilateral trainagle D. Rectangle
2493	The line y =mx +1 is tangent to the parabola y2 =4x if	A. m=1 B. m=2 C. m=3 D. m=4
2494	Question Image	
2495	Question Image	
2496	H.M. between 3 and 7 is	
2497	In natural logarithm the base is	A. 1 B. 0 C. 10 D. e
2498	Question Image	
2499	The sample space for tossing a coin once is	A. {T, T} B. {H, H} C. {H, T} D. None of these
2500	While witting his hooks on geometry, Euclid used	A. inductive method B. deductive method C. implication D. proposition
2501	Question Image	

2502	Question Image	A. The law of sines B. The law of tangents C. The pythagorus theorem D. None of these
2503	6! = _____	A. 360 B. 720 C. 6.5.4 D. None of these
2504	For graphing a linear inequality, solid line is drawn if the inequality involves the symbols:	A. > or < B. <u>></u> or <u><</u> C. = or≠ D. = or >
2505	The formula an = a +(n-1)d for an A.P is called	A. nth term of an A.P B. Sum of first n terms C. A,M between a and b D. None of the above
2506	Question Image	A. Rational B. Irrational C. Non-real D. Zero
2507	Question Image	
2508	sin -1(sin2π/3) =	A. π/2 B. 2π/3 C. -3π/2 D. π/3
2509	The extraction of cube root of a given number is a	A. Unary Operation B. Binary Operation C. Relation D. None of these
2510	Question Image	
2511	Question Image	A. Singular B. Non-singular C. Adjoint D. None of above
2512	How many types of an equation	A. 1 B. 3 C. 2 D. None
2513	The solution of equation x2 + 2 = 0 in the set of real number is	A. Infinite set B. Singleton set C. Null set D. None of these
2514	Question Image	A. I and III quadrants B. II and III quadrants C. I and II quadrants D. II and IV quadrants
2515	If a_1, r are first term and the common ratio respectively then the sum of an infinite geometric series is	
2516	The remove the term involving xy, from 7x2 - 6√3xy+ 13y2 -16 =0 the angel of rotation is	A. θ = 30° B. θ = 45° C. θ = 60° D. θ = 75°
2517	Question Image	A. Principle of equality of fractions B. Rule for product of fractions C. Golden rule for fractions D. Rule for quotient of fractions
2518	1 + 2 + 3 + ... + n = _____	
2519	The solution set of the inequality ax + by < c is	A. straight line B. half plane C. parabola D. none of these
2520	The seventh term of (x3+1/x)8is	A. 71 B. -22 C. 27 D. 28
2521	The expansion $(1+x)^{-3}$holds when	A. |x| > 1 B. |x| < 1

	The expansion $(1+x)^n$ holds when	C. x < 1 D. x > 1
2522	Question Image	
2523	Question Image	A. I B. 14 I C. 0 D. None of these
2524	An A.P. consists of n(odd terms) and its middle term is m. then the sum of the A.P. is	A. 2 mn B. 1/2 mn C. mn D. mn²
2525	If a and b are real numbers then a+b is also real number this law is called	A. associative law of addition B. closure law of addition C. Distributive law of addition D. Commutative law of addition
2526	If the intersecting plane is parallel to a generator of the cone, but intersects its one nappe only, the curve obtained is	A. an ellipse B. a hyperbola C. a circle D. a parabola
2527	If A is non-empty set, any subset of AxA is called a relation in a	A. A B. B C. D D. r
2528	Question Image	D. none of these
2529	If the expansion of $(1 + x)^{20}$, then co-efficient of rth ad (r + 4)th term are equal, then r is	A. 7 B. 8 C. 9 D. 10
2530	If a = {2m/2m < 9 ,m€ p} , the (n A) =	A. {2,3,4,5,6,7,8} B. {2,4,6,8.....16} C. { 4, 6} D. {2,3,5,7}
2531	1/3 is _____	A. A prime number B. An integer C. A rational number D. An irrational number
2532	Question Image	
2533	Question Image	A. π B. π / 2 C. π / 3 D. π / 4
2534	Question Image	A. (x, y) B. (kx, y) C. (x, ky) D. (kx, ky)
2535	The distance between two points P(x1, y1) and Q(x2, y2) is	
2536	The line y= 4x +c touches the hyperbola x2- y2 =1 if and only if	A. c =±√2 B. c =0 C. c=±√17 D. c=±√15
2537	Question Image	A. 36 B. 360 C. 24 D. 6
2538	The range of the principle cos function is	
2539	If x^2- 7x + a has remainder 1 when divided by x + 1, then a = _____	A. -7 B. 7 C. 0 D. None of these
2540	If $d_1$is the distance between (0,0) and (1,2) and $d_2$is the distance between (0,0) and (2,1) then	A. d₁= d₂ B. d₁<d₂ C. d_{1>}d₂ D. none of these
2541	Question Image	
2542	The directrix of v2 =-4ax is	A. y =-a B. y = a

		C. x = a D. x = -a
2543	The modulus of a vector $\underline{i}-\underline{j}+k$ is:	A. √3 B. 1 C. √2 D. ∞
2544	Question Image	
2545	Question Image	A. 0 B. 1 C. 2 D. 1/2
2546	1,1/3,1/5,1/7,1/9..... is a	A. geometric sequence B. finite sequence C. infinite sequence D. arithmetic series
2547	G = {e, a, b, c} is an Abelian group with e as identity element The order of the other elements are	A. 2,2,2 B. 3,3,3 C. 2,2,4 D. 2,3,4
2548	If $\sin 6\theta + \sin 4\theta + \sin 2\theta$, then θ=	
2549	Which of the following represent injuctive function	
2550	(a,0) x (c, 0) =	A. (0,ac) B. (ac, 0) C. (0,0) D. (a, c)
2551	Question Image	
2552	If A ⊆ B then A ∪ B is	A. A B. B C. A' D. A ∩B
2553	Question Image	A. A B. A' C. U D. None of these
2554	1+3x+6x2 +10x3 +....=	A. (1+x)-3 B. (1-x)-2 C. (1-x)-3 D. (1+x)-2
2555	A conditional is regarded as false only when the antecedent is true and consequent is	A. True B. False C. Known D. Unknown
2556	Cos 60° = _____	A. 1 B. 2 C. 1/2 D. 3
2557	Question Image	
2558	When we expand $(a + 2b)^5$then	A. a⁵+ 10a⁴b + 40a³b²+ 80a²b³+ 80ab⁴+ 32b⁵ B. a⁵+ a⁴b + a³b²+ a²b³+ ab⁴+ b⁵ C. 5a⁵+ 4a⁴b + 3a³b²+ 2a²b³+ 1 ab⁴+ b⁵ D. None
2559	The Domain of y = sin x is _____	A. Set of real numbers B. Rational C. Irrational no. D. None of above
2560	The numbers of G_1, G_2, G_3..... $G_n$are called n geometric means between a and b is a, G_1, G_2, G_3, ... G_n, b are in	A. H.P. B. A.P. C. G.P. D. None of these
2561	If $x = 1 - t^2$ and $y = 3t^2 - 2t^3$ then dy/dx =	A. (1-t) B. 3(1+t) C. 3(t-1) D. 3/1-t
2562	The position vector of any point in space is	

2563	The two lines 5x + 7y = 35 and 3x -7y=21, intersect at the point:	A. (7,5) B. (1,2) C. (2,7) D. (7,0)
2564	If t is the parameter for one end of a focal chord of the parabola y^2= 4ax, then its length is	
2565	If the centre of the circle is the origin, then equation of the cirlce is	A. x²+ y²= 0 B. 2gx + 2fy - c = 0 C. x²+ y²= r² D. gx + fy - c/2 = 0
2566	In an A.P,a +(n-a)d is	A. 1st term B. General term C. Last term D. None of these
2567	Disjunction of p and q is	A. p or q B. p and q C. p if q D. p implies q
2568	If n is a negative integer n! is	A. 1 B. 0 C. Unique D. Not defined
2569	Question Image	
2570	The roots of the equation 2^{2x}- 10.2^x+ 16 = 0 are	A. 2, 8 B. 1, 3 C. 1, 8 D. 2, 3
2571	The matrix A = [aij]mxn with m ≠n is always	A. Symmetric B. Hermition C. Skew-symmetric D. None
2572	Question Image	A. -152 B. -252 C. 371 D. -421
2573	Question Image	
2574	Question Image	A. A.P. B. G.P. C. H.P. D. None of these
2575	9. 8. 7. 6= _____	
2576	The term involving x^4 in the expansion (3-2x) is	A. 217x⁴ B. 15120x⁴ C. 313x⁴ D. -25x⁴
2577	Which of the following has the same value as i113	A. i B. -1 C. -i D. 1
2578	3, 6, 12,.... is	A. A.P B. G.P. C. H.P. D. None of these
2579	60° = _____	
2580	sin[$\cot^{-1}${cos($\tan^{-1}$x)}]=	
2581	Question Image	A. -1 B. 0 C. 1 D. undefined
2582	If f(x) = $(-x)^2$then f(-2) is	A. 0 B. 2 C. -4 D. 4
2583	Number of combination of zero or more things out of n different things	A. nPn B. nPr C. nCr D. 2n

		D. 2π
2584	If the flag-staff 6 meters high placed on the top of a tower. Makes the shadow 2√3 m on the ground, then the angle of elevation of the sun is	A. 30^o B. 35^o C. 45^o D. 60^o
2585	Question Image	A. Free vector B. Null vector C. Unit vector D. None of these
2586	Question Image	
2587	The slope of the line from B (2,-3) through A (0,3) is:	A. -3 B. 1/3 C. 0 D. undefined
2588	If A,B and C are three matrices, and A is non singular then AB = AC iff B=	A. A B. 0 C. C D. A⁻¹
2589	Question Image	A. I3 B. rI3 C. r D. none
2590	The equation of the sphere passing thro' (0, 0, 0), (a, 0, 0), (0, b, 0), (9, 0, c) is	A. x²+ y²+ z²+ 2 ax +2 by + 2cz = 0 B. x²+ y²+ z²- 2ax - 2 by - 2cz = 0 C. x²+ y²+ z²- ax - by - cz = 0 D. x²+ y²+ z²+ ax + by + cz = 0
2591	The set Q	A. Forms a group under addition B. Does not form a group C. Contains no additive indentity D. Contains no additive inverse
2592	Domain of y = scs x is	A. All real numbers except π/2 + n*π B. R C. All negative integers D. None of these
2593	The mid point of the line segment joining the points A(3,1) and B(-2,-4) is	A. (1, -3)
2594	The locus of the centre of a circle which touches two given circles externally is:	A. a hyperbola B. an ellipse C. a circle D. a parabola
2595	If the focus lies on the y-axis with coordinates f(0,a) and directrix of the parabola is y = -a, the equation of parabola is:	A. y² = -4 ax B. x² = 4ay C. x² = -4ay D. y² = 4ax
2596	Question Image	A. A onto B B. both a & c C. A into B D. none of these
2597	2.333....is a	A. Irrational no B. Complex no C. Rational no D. None of these
2598	Question Image	
2599	24 can be written as a product of	A. Odd factors B. Even factors C. Whole factors D. Prime factors
2600	The probability to get an odd number in a dice thrown once is	A. 6 B. 1 C. 1/6 D. 1/2
2601	If ΔABC is right triangle then the law of Cosines reduces to	A. The Pythagoras Theorem B. The law of Sines C. The law of cosines D. The law of tangents
2602	Question Image	
2603	The points (a ,0),(0,b) and (3a , -2b) are:	A. Collinear B. Vertices of isosceles triangle C. corner of a right-angled triangle

		D. None of these
2604	If f(x) = cos x then f(0) is	A. 0 B. 1 C. 1/2
2605	The roots of the equation will be irrational if b^2-4ac is	A. Positive and perfect square B. Positive but not a perfect square C. Negative D. Zero
2606	A die is thrown, the probability that the dots on the top are prime numbers or odd numbers is	A. 1/2 B. 2/3 C. 1/3 D. 2/5
2607	The set of all positive even integers is	A. Not a group B. A group w.r.t subtraction C. A group w.r.t division D. A group w.r.t multiplication
2608	Question Image	
2609	Question Image	A. 0 B. -1 C. 1 D. not defined
2610	Multiplication of a row vector A by a column vector B requires as a precondition that each vector have	A. Same order B. Same number of elements C. Equal elements D. Transpose
2611	Which of the following is factor of p(x) =2x3 +3x2+3x+2 ?	A. x+1 B. 2x+1 C. 3x+1 D. 2x-1
2612	3x + 4 ≤ 0 is	A. not inequality B. equation C. identity D. inequality
2613	The solution of the equation 3 $\tan^2 x = 1$ is _____	D. none of these
2614	The domain of a finite sequence is a	A. Set of natural numbers B. R C. Subset of N D. Proper subset of N
2615	A square matrix all of whose elements except the main diagonal are zeros is called a	A. Null matrix B. Singular matrix C. Symmetric matrix D. Diagonal matrix
2616	The set of the first elements of the ordered pairs forming a relation is called its	A. Function on B B. Range C. Domain D. A into B
2617	In set builder notation the set {0,1,2,.....100} can be written as	A. {x / xε B ∧ x ≤ 100} B. {x / x ∈ W ∧ x < 101} C. {x / x ∈ Z ∧ x < 101} D. The set of first 100 whole numbers
2618	Roots of the equation $2x^2$- 7x + 3 = 0 are	A. Rational B. Irrational C. Complex D. None of these
2619	The roots of the equation ax^2+ bx + c = 0 are real and equal if	A. b²- 4ac < 0 B. b²- 4ac = 0 C. b²- 4ac > 0 D. None of these
2620	In (x + iy) x is the known as	A. Imaginary part of complex number B. Real part of complex number C. Complex number D. None of above
2621	Question Image	A. π / 3 B. π / 4 C. π / 6 D. 0
2622	Which of the following is the subset of all sets?	

2623	Question Image	
2624	What is the conjugate of -6 -i?	A. -6 +i B. 6+i C. -6 -i D. 6 -i
2625	Question Image	
2626	The set R is .....w.r.t subtraction	A. Not a group B. A group C. No conclusion drawn D. Non commutative group
2627	Question Image	
2628	Question Image	
2629	If cos 20°=K and cos x=2 k^2-1, then the possible values of x between 0° and 360° are	A. 140° B. 50° and 140° C. 50° and 130° D. 40° and 320°
2630	Question Image	
2631	The equation of the sphere thro' the origin and making intercepts a, b, c on co-ordinate axes is	A. x²+ y²+ z²+ ax + by + cz = 0 B. x²+ y²+ z²- 2ax - 2 by - 2 cz = 0 C. x²+ y²+ z²= a + b + c D. x²+ y²+ z²- ax - by - cz =0
2632	Question Image	
2633	A die is rolled. What is the probability that the dots on the top are greater than 4?	A. 1/4 B. 1/2 C. 1/3 D. 1/33
2634	The point which is closet to the focus of a parabola is:	A. vertex B. Chord C. Focus D. Directix
2635	Question Image	D. none of these
2636	The angles with some initial and terminal sides are called	A. Quadrantal angles B. Coterminal angles C. Allied angles D. None
2637	Question Image	A. -1 B. 0 C. 1 D. Undefined
2638	A Series which does not coverage to a Unique sum is called	A. Harmonic Series B. Oscillatroy Series C. Arithmetic Series D. None of these
2639	If A is a set then any subset R of A x A is called	A. relation on A B. relation on B C. relation from A to B D. relation from B to A
2640	If the angle between two vectors with magnitude 6 and 2 is 60° when their scalar product is	A. 12 B. 6 C. 3 D. 0
2641	1/3 is a decimal	A. Recurring B. Terminating C. Non-terminating D. None of the above
2642	For any integer k, w^n= _____ when n = 3k	A. 1 B. 2 C. 0 D. -4
2643	Question Image	
2644	Question Image	
2645	If y = x^nthen dy/dx equals:	A. nx B. xⁿ⁻¹ C. nxⁿ⁻¹ D. n

2646	Question Image	D. none of these
2647	Question Image	
2648	Question Image	A. K/6 B. 2K C. 3K D. 6K
2649	Let P(x_1, y_1) and Q(x_2, y_2) be two points in the co-ordinate plane. Let d = distance between P and Q	
2650	Question Image	A. (1,7/3) B. (1, 7/5) C. (1, 11/7) D. (1, 3/5)
2651	$\tan^{-1}x > \cot^{-1}x$ holds for	A. x > 1 B. x < 1 C. x = 1 D. All values of x
2652	Question Image	A. 1.5 B. 1.2 C. 8 D. None of these
2653	(2, 1) is in the solution of the inequality	A. 2x + y <u>></u> 7 B. x - y > 2 C. 3x + 5y < 6 D. 2x + y < 6
2654	Question Image	A. -2217 B. -8064 C. -1301 D. -8011
2655	Question Image	
2656	The function sine and Cosine have the closed internal as their range	A. [1, 0] B. [-1, 1] C. [0, 1] D. [-1, 2]
2657	Question Image	A. direction ratios B. direction cosines C. direction angles D. none of these
2658	A circle passing through the vertices of any triangle is called _____	A. In circle B. Circum circle C. Escribed circle D. None of these
2659	When a selection of object is made without paying regard to the order of selection, it is called	A. Sequence B. Series C. Combination D. Permutation
2660	Question Image	
2661	The vertex of the standard position angles lies on	A. (0,0) B. (0,1) C. (1,0) D. (1,1)
2662	Another name of quadratic equation is	A. Polynomial B. 2nd degree polynomial C. Linear equation D. simaltaneous equations
2663	Each point of the feasible region is called	A. Solution B. feasible solution C. Both a & b D. None
2664	Question Image	
2665	The distance of a point (x cosθ , x sinθ) from origin is:	A. x B. x tanθ C. -tanθ D. -cotθ
2666	Cofactor of an element a_{ij} is defined by	A. (-1)^{i+j}|A| B. (-1)^{i+j}M_{ij}

		C. (-1)^{i+j}M⁻¹ D. None of these
2667	Area ofΔABC=	A. ab sinα B. 1/2 ab sinα C. 1/2 ac sinγ D. 1/2 ac sinβ
2668	The first three terms in the expansion of $(1 - x)^{-2}$are	A. 1 - 2x + 3x² B. 1 - 2x - 3x² C. 1 + 2x + 3x² D. -2 - 2x +3x²
2669	For all points (x,y) in second quadrant	A. x > 0 , y < 0 B. x > 0 , y > 0 C. x < 0 , y < 0 D. x < 0 , y > 0
2670	Question Image	
2671	Name the property used in 4.1 + (-4.1) = 0	A. Additive inverse B. Multiplication inverse C. Additive identity D. Multiplication identity
2672	The number of terms in the expansion of $(a + x)^{12}$is	A. 13 B. 12 C. 11 D. 10
2673	The distance between two points P(x_1, y_1) and Q (x_2, y_2) is	
2674	The sixth term of the sequence 1,3,12,60....is	A. 1500 B. 72 C. 2160 D. 2520
2675	The transport of a null matrix is	A. Row matrix B. Column matrix C. Square matrix D. Null matrix
2676	Question Image	A. sin h x B. cos h x C. tan h x D. cot h x
2677	Question Image	A. 0 B. 1
2678	For each real number, there is a number which is its	A. Negative B. Possitive C. Opposite D. Similar
2679	6 is	A. A prime integar B. An irrational number C. A rational number D. An odd integer
2680	Question Image	A. y : x B. x : y C. -y : x D. -x : y
2681	If G is a G.M between a and b then a,G,b are in	A. A.P B. H.P C. G.P D. None of these
2682	In school there are 150 students Out of these 80 students enrolled for mathematics class 50 enrolled for English class and 60 enrolled for Physics class The student enrolled for English cannot attend any other class but the students of mathematics and Physics can take two courses at a time Find the number of students who have taken both physics and mathematics.	A. 40 B. 30 C. 50 D. 20

2683	The point (1,3) is one solution of	A. 3x + 5y > 29 B. 3x + 5y < 7 C. x + 2y < 4 D. x + 4y > 3
2684	The domain of the function x/x^2 -4 is given by	A. R B. R + 2 C. [R - (<u>+</u>2) D. R-4
2685	n(n - 1) (n - 2) .... (n - r + 1) = _____	
2686	The ortho center of triangle whose vertices are (0,0)(3,0)(0,4) is	A. (0,0) B. (1,1) C. (2,2) D. (3,3)
2687	Question Image	
2688	The positive real number which is the measure of the length of a vector is called the	A. Unit vector B. Modulus C. Inverse D. None of these
2689	The period of 3 sin x is	A. 2π B. 9π C. 3π D. 5π
2690	Question Image	A. (2x+a+b+c) B. (a+b+c) C. (a+b+c+x) D. 0
2691	The radius of the circle x^2 + y^2 - 6 x + 4 y +13 = 0 , is	A. 1 B. 2 C. 0 D. None of these
2692	The law of sines can be used to solve	A. Right angle triangle B. Isosceles triangle C. oblique triangle D. haxagon
2693	The set {0,-1} hold closure property under	A. Addition B. Both a & c C. Multiplication D. None of these
2694	Question Image	
2695	d / dx (cot x) =	A. Sec x tan x B. -csc² x C. Sec² x D. 1/cot² x
2696	Question Image	
2697	i^3 =	A. -1 B. i C. -i D. 1
2698	3/2 is	A. An irrational number B. Whole number C. A positive integer D. A rational number
2699	sin(π+θ)=_____;	A. sinθ B. cosθ C. -sinθ D. -cosθ
2700	The√ is used for the	A. Positive square root B. Negative square root C. +ve and -ve square root D. Whole number
2701	Question Image	D. none of these
2702	Question Image	
2703	Question Image	A. Principle of equality of fractions B. Rule for product of fraction C. Rule for quotient of fraction D. Golden rule of fractions

2704	The line y = 2 x + c is a tangent to the parabola y^2= 16 x if c equals	A. -2 B. -1 C. 0 D. 2
2705	The area enclosed between the graph y = x^2 - 4x and the x- axis is:	A. 20/3 B. 41/3 C. 32/3 D. 25/3
2706	Question Image	D. None of these
2707	If 4 - x >5, then	A. x > 1 B. x > -1 C. x < 1 D. x < -1
2708	When rational fraction is separated into partial fractions, the result is	A. an identity B. A fraction C. A partial sum D. Improper fraction
2709	If a, b, c are the measures of the sides of a triangle then	
2710	Two circles x2 +y2 +8x -9= 0 and x2+y2+6y +k =0 touchinternallyif the value of k is	A. k = 9 B. k = ±9 C. k=-9 D. k=11
2711	The inverse of a line is	A. inverse B. Line C. quadratic D. Circle
2712	Question Image	A. 1 B. -i C. i D. 0
2713	The angle of elevation of a tower from a point A due south of it is x and from a point B due east of A is y. If AB = 1, then the height h of the tower is given by	
2714	Which of the following is the subset of all sets	A. Φ B. {1,2,3} C. {Φ} D. {0}
2715	The angle between the vectors 3i + j - k and 2i - j + k is	
2716	Composition of functions is	A. Non-commutative (fg ≠ gf) B. non-associative [8(fh) ≠(8f)h] C. Commutative (fg = gf) D. f of-1≠ 1
2717	Question Image	A. 100x ⁹⁹ B. 100x ¹⁰¹ C. -99x ⁹⁹ D. -100x ¹⁰¹
2718	56^o=.....radians	A. 1.25 B. 2.56 C. 95 D. 0.98
2719	A = [3] is a/an	A. Square matrix B. Scalar matrix C. Diagonal matrix D. Identity matrix
2720	The set of whole numbers is subset of	A. The set on integers B. The set of natural numbers C. {1, 3, 5, 7, ...} D. The set of prime numbers
2721	Question Image	A. An empty set B. Universal set C. A singleton set D. None of these
2722	Question Image	
2723	Question Image	
		A. 0

2724	Question Image	B. 1 C. 2
2725	If the exponent in the binomial expansion is 6, then the middle term is	A. 2nd B. 3rd C. 4th D. 5th
2726	The point where the axis meets the parabola is called	A. Directrix B. Foucu C. Chord D. Vertix
2727	$\int f(x)$ is known as:	A. Definite itegral B. Indefinite integral C. Fixed integral D. Multiple integral
2728	The length of perpendicular from (3,1) to 4x +3y +20 =0 is	A. 6 B. 7 C. 3 D. 8
2729	The set of first elements of the ordered pairs forming the relation is called its	A. domain B. range C. ordered paris D. relation
2730	The group of a constant line is	A. Vertical line B. Parabola C. Circle D. Horizontal line
2731	_____ invented a symbolic way to write the statement "y is a function of x" as y= f(x)	A. Leibniz B. Newton C. Euler D. None of these
2732	If f(x) = x + 1 then $f(z^2-1)$ is	A. z² B. z²+ 2 C. z²- 2 D. none of these
2733	Question Image	A. Evert element of A is in B B. Every element of B is in A C. Every element of A is in B' D. Every element of A is in A
2734	Question Image	B. sin 2x + c C. -sin 2x + c
2735	The period of$\int\sin 2x\int$ is	A. π/2 B. -π/2 C. π D. π/3
2736	The set of even prime numbers is	A. (2,4,6,8,10} B. {2,4,6,8,10,12} C. {1,3,5,7,9} D. {2}
2737	The coordinates of the point that divides the join of A(-6,3) and B(5, -2) in the ratio 2:3 internally	
2738	The central angle of an arc of a circle whose length is equal to the radius of the circle is called one	A. Degree B. Second C. Minute D. Radian
2739	Question Image	
2740	Question Image	
2741	$P \notin A$ means	A. Pis subset of A B. Pis an element of A C. P does not belongs to A D. A does not element of P
2742	pth term of an H.P. is qr and qth term is pr then the rth term of the H.P. is	A. pqr B. 1 C. pq D. pqr²
2743	Question Image	A. A = C B. A = B C. B = C D. None of these

2744	If l, m, n are the d.c.'s of a line, then	A. l2+ m2+ n2= 0 B. l2+ m2+ n2= 1 C. l + m + n = 1 D. l = m = n = 1
2745	Question Image	A. 3 B. 1 C. 2 D. 4
2746	Question Image	
2747	x^2+ x - 6 = 0 is a conditional equation and it is true for	A. 2, 3 B. 2, -3 C. -2, -3 D. -2, 3
2748	Cos-1(x)=	A. cos x B. x C. tan-1(-x) D. Sec-1 (1/x)
2749	Which of the following integrals can be evaluated	
2750	If A and B are two matrices such that AB = B and BA = A then A2 + B2 =	A. 2 AB B. 2 BA C. A + B D. AB
2751	w^{15}= _____	A. 0 B. 1 C. w D. w²
2752	The st. lines whose direction cosines satisfy al + bm + cn = 0, fmn + gnl + hlm=0 are perpendicular if	
2753	Question Image	A. 3 B. 6 C. 0 D. None of these
2754	If for the matrix A,A5 = 1,then A-1=	A. A2 B. A3 C. A D. None of above
2755	154° 20' =	A. 2550/34401π B. 27721/22400 π C. 2521/32400π D. 4125/32400π
2756	cos 2α=	A. 1 - 2 sin²α B. sin ²α+ cos²β C. sin²α- cos²β D. None of these
2757	If there are m rows and n columns in a matrix then its order is	A. m x n B. m x m C. n x n D. n x m
2758	A triangle has ____ elements	A. 3 B. 4 C. 5 D. 6
2759	The difference of two consecutive terms of an A.P is called the	A. Common difference B. Common ratio C. Geometric series D. Geometric mean
2760	Question Image	A. trigonometric equation B. conditional equation C. identity D. None
2761	Question Image	

2762	The vertex of the parabola (xsin a -ycos a)2 =4a(xcos a +ysin a) lies at	A. (acos a,asın a) B. (a,0) C. (cos a,sin a) D. (0,0)
2763	The number of triplets (x, y, z) satisfying $\sin^{-1}x + \cos^{-1}y + \sin^{-1}z = 2\pi$ is	A. 0 B. 2 C. 1 D. Infinite
2764	The angle of depression of a point A on the ground from the top of the tower is 30□,then the angle of elevation of the top of the tower at the point A is	A. 60□ B. 40□ C. 41□ D. 30□
2765	What is the conjugate of -6 -i	A. -6 +i B. 6 + i C. -6 -i D. 6 -i
2766	Question Image	A. xy B. y C. 0 D. x
2767	Conjunction of two statements p and q is denoted symbolically as	
2768	The conic is a parabola, when:	A. ℮ > 1 B. ℮ < 1 C. ℮ = 1 D. ℮ = 0
2769	For trival solution |A| is	A. A B. |A| = 0 C. A = 0 D. |A|≠ 0
2770	Question Image	A. sin h x B. cos h x C. sec h x D. cosec h x
2771	The general value ofθsatisfying the equation 2 $\sin^2\theta$- 3 sinθ-2 = 0 is	
2772	0! = _____	A. 0 B. 1 C. 2 D. Not defined
2773	The 31 term of the A.P 5,2,-1.....is	A. -82 B. 82 C. 85 D. -85
2774	The gradient of a curve Y = ax+b/x2 at (2,5) is 2. The value of a and b are.	A. 7,4 B. 7/3,4/3 C. 7,2 D. 7/3,2/3
2775	The parabola y^2= x is symmetric about	A. x-axis B. y-axis C. Both x and y-axis D. The line y = x
2776	Question Image	A. Improper rational fraction B. Rational fraction C. Proper rational fraction D. None of above
2777	Range of cosec x is _____	A. {-1, 1} B. R C. Negative real numbers D. R - { x | - 1 < x < 1}
2778	Question Image	A. A B. B C. U D. None of these
2779	Question Image	A. Associative law of addition B. Commutative law of addition C. Additive identity D. Closure law of addition
2780	Period of tan 4x is _____	

2781	If B⊆ A, then complement of B in A is = ----------	A. A-B B. A∩B C. B-A D. A∪B
2782	The equation of the circle witch centre (-3, 5) and radius 7 is	A. (x-3)²+ (y+5)²= 7² B. (x-3)²+ (y-5)²= 7² C. (x+3)²+ (y+5)²= 7² D. (x+3)²+ (y-5)²= 7²
2783	Question Image	A. 0 B. -1 C. 1/2 D. 1
2784	Sin 90° = _____	A. -1 B. 0 C. 1 D. Undefined
2785	The statement that a group can have more than one identity elements is	A. True B. False C. Ambiguous D. Some times true
2786	If the exponent in the binomial expansion is 6, then the middle term is	A. 2nd term B. 3rd term C. 4th term D. 5th term
2787	Question Image	
2788	Question Image	
2789	Differentiate the expression $(x-1)(x+2)^2$ with respect to x gives	A. 2x(x+2) B. 2(x-1)(x+2) C. 2(x+1) D. 3x (x+2)
2790	Question Image	
2791	If $f(x) = x^5 + x^3 + x$ the value of $f^1(1)$ is:	A. 0 B. 8 C. 5 D. 9
2792	If either A = 0 or B =0,then Ax2 +By2 +2Gx +2Fy +c =0 represents a	A. Circle B. Hyperbola C. Ellipse D. Parabola
2793	For a square matrix A, if $A = A^t$, then A is called	A. matrix B. Transpose C. Symmetric D. Non-symmetric
2794	Question Image	
2795	If n is odd then the middle terms in the expansion of $(a + x)^n$ are	
2796	The nth term of a G.P. is	A. a₁rⁿ B. a₁rⁿ⁺¹ C. a₁rⁿ⁻¹ D. a₁r⁻ⁿ
2797	Question Image	A. 71 B. -22 C. 27 D. 28
2798	E-radius corresponding to < C is	
2799	If $y = (7x + 9)^2$, then dy/dx equals:	A. 98x +126 B. 14x C. 14x +18 D. 14x+81
2800	Optimal solution is found by evaluation the objective function at	A. All point of feasible region B. Corner point C. Origin D. None
2801	$\sin^{-1}[-1/2]$ = _____	
2802	Question Image	A. a = a B. a < a

		C. a > a D. a²= a
2803	Question Image	
2804	If n is any positive integer then $n^2 > n + 3$ for	
2805	Question Image	
2806	Question Image	A. Set of whole number B. Rational Numbers C. Complex numbers D. Whole numbers
2807	What is the conjugate of -7 -2i ?	A. -7 + 2i B. 7 +2i C. 7 -2i D. √53
2808	If (a, b) is the mid-point of a chord passing thro' the vertex of the parabola $y^2 = 4x$, then	A. a = 2b B. 2a = b C. a²= 2b D. 2a = b²
2809	csc(-π/2) = _____;	A. 0 B. 1 C. -1 D. Undefined
2810	If a≠ , b≠ 0 and|a=b|=|a-b|,then vectors a and b are:	A. Parallel to each other B. Perpendicular to each other C. Inclined at 60^o D. neither parallel nor perpendicular
2811	The number of x-intercepts of y= sin x in his period	A. 0 B. 1 C. 2 D. 3
2812	Domain of sec x is _____	
2813	A circle passing through the vertices of any triangle is called	A. Circumcirle B. Incircle C. Escribed circle D. Unit circle
2814	How many 6-Digit number can be formed without repairing any digit from the digits 0,1,2,3,4,5	A. 720 B. 600 C. 120 D. 6-5!
2815	Question Image	
2816	If f(x) = c then $f^{-1}(x)$ equals:	A. 1 B. 0 C. cx D. c
2817	Question Image	
2818	Find all the angle between -360^o and 180^o when sinx = 1/2?	A. -30^o , -150^o B. 30^o , 150^o C. 30^o , -150^o D. -30^o, 150^o
2819	Which is the proper rational function	
2820	The number of non zero rows in echelon form of a matrix is called	A. Order of matrix B. Rank of matrix C. Row operation D. None of these
2821	Digit in the unit place of the number 183! + 3^{183}	A. 7 B. 6 C. 3 D. 0
2822	n(n - 1) (n - 2) in factorial form is	
2823	Cos 0° = _____	A. -1 B. 0 C. 1 D. Undefined
2824	Question Image	
		A. a-b=ab

2825	Question Image	B. ab=a C. a+b=ab
2826	A circle which touches one side of a triangle extermally and the other two sides produced is called	A. In-circle B. Circumcircle C. e-circle D. Point circle
2827	Roots of the equation $x^2+ 2x + 3 = 0$ are	A. Real and equal B. Real and distinct C. Complex D. None of these
2828	If f (x) = |x|, then (0,0) is the	A. Critical point B. Inflection point C. Stationary point D. None of these
2829	A conditional "if p then q" is denoted by	
2830	Question Image	
2831	The consecutive terms of a progressions are 30, 24, 20. The next term of the progression is	
2832	If A is a skew-symmetric matrix of order n and P, any square matrix of order n.prove that P' AP is	A. Skew-symmetric B. Symmetric C. Null D. Diagonal
2833	Question Image	A. Multiplication property B. Additive property C. Trichotomy property D. Transitive property of inequality
2834	Question Image	D. none of these
2835	The line through the focus and perpendicular to the directrix is called _____ of the parabola	A. axis B. focal chord C. tangent D. latus rectum
2836	Question Image	A. (1, 3) B. (-1, -3) C. (1, -3) D. (-1, 3)
2837	The axis of the parabola $y^2= 4ax$ is	A. X = 0 B. Y = 0 C. X = y D. X = -y
2838	Question Image	
2839	The multiplicative inverse of 2/3 is	A. 3/2 B. -2/3 C. -3/2 D. 1
2840	The vertex of the graph of the quadratic function f(x) = x2 -10, is	A. (0 , -10) B. (-10,0) C. (10,0) D. (0,10)
2841	The number of permutations of n objects of which there are $n_1$like of one kind, $n_2$like of the second kind and $n_3$like objects of third kind are	
2842	The equation of the plane which bisects the line joining (2, 3, 4) and (6, 7, 8) is	A. x + y + z - 15 = 0 B. x - y + z - 15 = 0 C. x - y - z - 15 = 0 D. x + y + z + 15 = 0
2843	Question Image	A. Scalar matrix B. Identity matrix C. Null matrix D. Symmetric matrix
2844	Question Image	D. none of these
2845	The zero vector is regarded to be parallel to	A. Every vector B. Is some cases C. Both a,b D. None
		A. focal distance of the vertex

2846	Latus rectum = 4 x _____	B. Chord C. Focus D. 1/2
2847	If n∈Z+ then(a+x)n is a/an	A. Finite series B. Convergent series C. Infinite series D. Divergent series
2848	The roots of (x - a)(x - b) = ab x2 are always	A. Real B. Depends upon a C. Depends upon b D. Depends upon a and b
2849	Question Image	
2850	A non-homogeneous linear system AX = B has no solution if	A. |A| = 0 B. |A|≠ 0 C. Rank (a) = no of variables D. Rank > no of variables
2851	3x + 4 ≥ 0 is	A. equation B. inequality C. identity D. none of these
2852	sin h x = _____	
2853	Question Image	A. 11 B. 61 D. 1
2854	The value of n, when $^{n}P_{2}$= 20 is	A. 3 B. 4 C. 6 D. 5
2855	Gooch crucible is made of :	A. Brass. B. Porcelain. C. Bronze. D. Gold.
2856	sin 540° =	A. 0 B. 1 C. 2 D. 3
2857	Which of the following statement, is true	A. Lahore is in Punjab and 5>7 B. Lahore is the capital of Pakistan and 3<23 C. Lahore is capital of Sindh and 2+2 = 7 D. Lahore is the capital of Sindh or 2+2=4
2858	3/4 is _____	A. An odd number B. An even number C. A natural number D. A rational number
2859	Question Image	
2860	Question Image	A. - cot 4x + c B. cot 4x + c C. tan 4x + c D. - tan 4x + c
2861	Which is an explicit function	A. y = x²+ 2x - 1 B. x²+ xy + y²= 2 C. x²+ y²= xy + 2 D. All are
2862	The line Ax + By + C = 0 will touch the circle x^2+ y^2=λ when	A. C²=λ(A²+ B²) B. A²=λ(A²+ C²) C. B²=λ(A²+ C²) D. None of these
2863	cos 315° = _____	
2864	If -1 < x < 0, which of the following statements must be true?	A. x < x²< x³ B. x < x³< x² C. x²< x³< x D. x²< x < x³
2865	Question Image	D. none of these

2866	√23 is	A. A rational number B. A irrational number C. An even integer D. A factor of 36
2867	Question Image	A. 6x - 2 + c B. x³- x²+ x + c C. 6x - x²+ c D. 6x³- x²+ c
2868	In triangle ABC, in which b=95, c=34, a =52 then the value of a=	A. 18 cm B. 18.027 cm C. 20.7 cm D. 19 cm
2869	Question Image	
2870	The set of second elements of the ordered pairs forming a relation called a	A. Domain B. Range C. Function D. Relation
2871	A monoid (G, *) is said to be group if	A. have identity element B. is commutative C. have inverse of each element D. None of these
2872	Question Image	
2873	An even function is symmetric about the line	A. y = x B. x = 0 C. y = -x D. y = 0
2874	The equation of the chord of the circle $x^2+ y^2- 4x = 0$ whose mid-point is (1, 0) is	A. y = 2 B. y = 1 C. x = 2 D. x = 1
2875	tan270° =_____;	A. 0 B. 1 C. -1 D. Undefined
2876	Question Image	
2877	Question Image	A. The law of of sines B. The law of tangents C. The law of consines D. None of these
2878	$Sec^{-1}x$ =	A. Cos⁻¹1/x B. cosec⁻¹1/x C. Cos⁻¹(-x) D. Tan⁻¹x
2879	Question Image	
2880	Question Image	
2881	w^4= _____	A. 0 B. 1 C. w D. w²
2882	The value of 2π/3 in degree is	A. 120^o B. 160^o C. 150^o D. 60^o
2883	tan(π-θ)=_____;	A. tanθ B. cotθ C. -tanθ D. -cotθ
2884	If u = 2a$\underline{i}$ + $\underline{i}$ - $\underline{k}$ and $\underline{v}$ = $\underline{i}$ +a$\underline{i}$ + 4$\underline{k}$ are perpendicular then a =	A. 4 B. 1/2 C. 3 D. 4/3
2885	If there is one-one correspondence between A and B, then we write.	A. A = B B. A⊆ B C. A⊇ B D. A ~ B
		A. (r-1)th term

2886	The general term in the expansion of (a+x)n is	B. (r+1)th term C. rth term D. none
2887	Domain of cosec x is _____	
2888	If n is any positive integer then n! > $n^2$for	
2889	An event having more than one sample point is called	A. Certain event B. Compound event C. Simple event D. None
2890	If f(x)= x^3 then f(-2) is	A. -2 B. -4 C. -8 D. 8
2891	Question Image	A. Biconditional B. Implication C. Antecedent D. Hypothesis
2892	Question Image	
2893	If n is a positive integer then n! is	A. (n - 1) (n - 2) .....3,.2.1 B. n(n - 1) (n - 2) ...3.2.1 C. n(n - 1) (n -2) ... 3 D. None of these
2894	For each even natural number n (n^2-1) is divisible by	A. 6 B. 3 C. 4 D. 8
2895	The number of terms in the expansion of (a + b)^{9}is	A. 10 B. 11 C. 9 D. 12
2896	The points (5, -4, 2),(4, -3, 1),(7, -6, 4),(8, -7, 5) are vertices of a	A. Square B. Parallelogram C. Rectangle D. Rhombus
2897	Question Image	A. 25 B. 16 C. 5 D. 0
2898	Which of the following is a vector	A. length B. momentum C. volume D. speed
2899	The point _____ is in the solution of the inequality 2x - 3y > 5	A. (1, -1) B. (2,2) C. (0,0) D. (3,0)
2900	If line through (4,3) and (2,k) is perpendicular to y =2x +3, then k =_____	A. -1 B. 1 C. -4 D. 4
2901	The unit vector along y-axis is	D. none of these
2902	Question Image	A. cos x B. - sin x C. - cos x D. tan x
2903	The set {1,2,3,4.....} is called	A. Set of natural numbers B. Set of whole numbers C. Set of rational number D. Set of irrational numbers
2904	x = 0 is in the solution of the inequality	A. x > 0 B. 3x + 4 < 0 C. x + 3 < 0 D. x - 2 < 0
2905	Sin -1 x=	A. sin(π/2-x) B. Sin-1 (π/2-x) C. π/2-cos-1x D. π/2 + cos-1x
		A. 2

2906	The distance of the point (-2 , 3) from y-axis is	B. -2 C. 3 D. 1
2907	Question Image	
2908	Question Image	
2909	There is no integer n for which 3^n is	A. Odd B. even C. Natural D. Prime
2910	To draw conclusions from some experiments or few contacts only is called:	A. Deduction B. Implication C. Conjunction D. Induction
2911	The n numbers $A_1,A_2,A_3,.....A_n$are called an arithmetic means between a and b if $a.A_1,A_2,A_3.....A_n$, b is _____	A. An arithmetic series B. An arithmetic sequence C. A geometric sequence D. A harmonic sequence
2912	Question Image	A. X = 100 sinθ B. X = 10 sinθ C. X = 100 secθ D. None of these
2913	Question Image	
2914	If the roots of x^2+ ax + b = 0 are non-real, then for all real x, x^2+ ax + b is	A. Negative B. Positive C. Zero D. Nothing can be said
2915	Question Image	
2916	If p, q, r and in A.P., a is G.M. between p and q and b is G.M. between q and r, then a^2, q^2, $b^2$are in	A. A.P. B. G.P. C. H.P. D. None of these
2917	(1+w)(1+w2)(1+w4)(1+w8)....50 factors	A. 0 B. -1 C. 1 D. 2
2918	Question Image	
2919	Period of sin x is	
2920	The point R dividing externally the line joining the points P(x_1, y_1) and Q(x_2, y_2) in the ratio k_1: $k_2$has the coordinates	
2921	The multiplicative inverse of (a,b) is	
2922	Question Image	A. [0, 0, 0] B. [1, 0, 0] C. [0, 1, 0] D. [0, 0, 1]
2923	Question Image	
2924	For all positive integral value of n,3^n< n! , when	A. n> 6 B. n< 6 C. n<11 D. n>11
2925	The maximum value of 12 sinθ-9 sin$^2\theta$is x	A. 3 B. 4 C. 5 D. None of these
2926	If a > 0 they parabola y2 =-4ax lies in	A. I and iv quadrant B. I quadrant C. II and III quadrant D. All are incorrect
2927	Question Image	A. cos 2x + c B. - cos 2x + c

	Question Image	C. tan 2x + c D. cot 2x + c
2928	The three noncollinear points through which a circle passe are known, then we can find the:	A. Variables x and y B. Value of x and c C. three constants f,g and c D. inverse of the circle
2929	The slope of the normal at (4,3) to the circle $x^2+y^2=25$ is	A. 3/4 B. -3/4 C. 4/3 D. -4/3
2930	Question Image	A. 2x cos x2 B. -2xcosxsinx C. 2x Sin x2 D. -Sin x2
2931	If x is an image of y under the function f. This can be written as	A. y = f(x) B. f(x) = 0 C. x = f(y) D. f(y) =0
2932	If ax + bx + c =0 is satisfied by every value of x,then	A. b = 0,c = 0 B. c = 0 C. b = 0 D. a = b = c = 0
2933	If a, b, c, d, e, f are in A.P.,then e-c is equal to	A. 2(c - a) B. 2(f - d) C. 2(d - c) D. d - c
2934	The value of x for which the polynomials x2 - 1 and x2 -2x + 1 vanish simultaneously is	A. 2 B. 1 C. -1 D. -2
2935	If A and B are two sets then intersection of A and B is denoted by	
2936	2/9,5/7∈ R,(2⎪9)(5⎪7)=10/63∈R this property is called	A. Associative property B. Identity property C. Commutative property D. Closure property w.r.t multiplication
2937	Question Image	
2938	Question Image	A. Closure law of addition B. Associative law of addition C. Additive inverse D. Additive identity
2939	2 x + 3 < 0 is.	A. Inequality B. Equality C. Identity D. None
2940	Question Image	
2941	Question Image	
2942	Which of the following statement, is ture	A. Lahore is in Punjab and 5>7 B. Lahore is the capital of Pakistan and 3<23 C. Lahore is capital of Sindh and 2+2=7 D. Lahore is the capital of Sindh or 2+2 = 4
2943	A class contains nine boys and three girls, in how many ways can the teacher choose a committee of four?	A. 60 B. 460 C. 495 D. 272
2944	If A and B are two disjoint events then	A. P(A∪B)=P(A)+P(B) B. P(A∪B)=P(A)-P(A∪B) C. P(A∪B)=P(A)or P(B) D. None
2945	Question Image	
2946	An equation of the form ax + by = k is homogeneous linear equation when:	
2947	The condition for ax2 + bx c to be expressed as the product of linear polynomials is	A. b4 - 4ac =0 B. b4- 4ac ≥0 C. b4- 4ac <0 D. b4= 4ac

2948	A matrix whose determinant is not zero is said to be	A. Singular B. Non-singular C. Adjoint D. Symmetric
2949	The set {-1,1} is	A. Group under the multiplication B. Group under addition C. Does not form a group D. Contains no identity element
2950	The point _____ is in the solution of the inequality 2x + 3y < 5	A. (1,1) B. (2,2) C. (0,1) D. (0,2)
2951	Question Image	A. Symmetric property B. Cancellation property w.r.t. multiplication C. Reflexive property D. Transitive property
2952	Question Image	
2953	Question Image	A. x³- x²+ x + c B. 6x - 2 + c C. x³- 2x + c
2954	A fraction in which the degree of the numerator is less the degree of the denominator is called	A. Polynomial B. Proper fraction C. Rational fraction D. None
2955	Question Image	A. I B. |A| C. |A| I D. None of these
2956	Given two independent event A and B such that P(A) = 0.30 and P(B) = 0.60. Probability of getting neither A nor B is	A. 0.28 B. 0.13 C. 0.12 D. 0.42
2957	Question Image	
2958	The distance of the point (a,b) from y-axis is	A. a B. b C. a + b
2959	If the circumference of a circle is divided into 360 congruent parts, the angle subtended by one part at the centre of the circle is	A. 1⁰ B. 1' C. 1" D. 1 rad
2960	The differential equations of all conis whose axes coincide with the co-ordinate axis is	
2961	Question Image	A. hypothesis B. implication C. consequent D. conditional
2962	Question Image	A. real number B. complex number C. rational number D. irrational number
2963	Question Image	
2964	Question Image	A. 405 / 256 B. 504 / 259 C. 450 / 263 D. None
2965	If α, β are the roots of $ax^2 + bx + c = 0$ and $\alpha + h, \beta + h$ are the roots of $px^2 + qx + r = 0$, then h =	
2966	The many subset can be formed from the set {a,b,c,d}	A. 8 B. 4 C. 12 D. 16
2967	Question Image	A. A⁻¹ B. A^t C. -A D. A
	If a_1, r and a_n are the first term, common ratio	A. a₁rⁿ

2968	and the nth term respectively of a G. P. then a_n=	B. a₁rⁿ⁻¹ C. a₁rⁿ⁺¹ D. a₁r
2969	If the graph of f is entirely below the x-axis, then the value of definite integral is	A. = 0 B. < 0 C. > 0 D. None
2970	Question Image	
2971	Question Image	A. Polynomial of degree 0 B. Polynomial of degree 2 C. Quadratic equation D. None of these
2972	Question Image	D. none of these
2973	Multiplicative inverse of 0 is	A. 0 B. 1 C. +-1 D. Does not exist
2974	64.A point (x, y, z) moves parallel to xy plane. Which of the three variables x, y, z remain fixed?	A. z B. x C. y D. x and y
2975	Question Image	A. 0 B. 1 C. 1/2
2976	The latus rectum of the ellipse $5x^2+ 9y^2= 45$ is	A. 10 / 3 B. 5 / 3 C. 3 / 5 D. 3 / 10
2977	If a force F = 2i + j +3k acts at point (1,-2,2) of a body then the moment of F about a pint lying on the line of action of the force is	A. 5 B. Equal to the moment of the force about origin C. 0 D. Cannot be found
2978	The process of finding a function whose derivative is given is called a	A. Differentiation B. Integration C. Differential D. None
2979	Question Image	
2980	Both the roots of the equation (x - b) (x - c) + (x - c)(x - a) + (x - a)(x - b) = 0 are always	A. Positive B. Negative C. Real D. None of these
2981	The number of permutation that can be formed from the letters of the word OBJECT is	A. 700 B. 600 C. 720 D. 620
2982	Question Image	A. n(A) B. n(B) C. 0 D. 1
2983	A polynomial of arbitrary degree	A. f(x) = o B. f(x) = x C. f(x) = a D. f(x) = ax + b,a ≠ 0
2984	A function whose range is just one elements is called	A. One-one function B. Constant function C. Onto function D. Identity function
2985	QUQ'	
2986	An unbiased die is thrown. Then the probability of getting a prime is	A. 1/2 B. 2/3 C. 3/4 D. None of these
2987	If the st. line 3x + 4y = K touches the circle $x^2+ y^2- 10x = 0$ then the value of K is	A. -1 or 20 B. -10 or 40 C. -2 or 20 D. 2 or 20
2988	The complement of set A relative to universal set U is the set	A. {x / x∈ A∧ x∈ U} B. {x / x∉ A∧ x ∈ U} C. {x / x∈ A and x∉ U}

	set U is the set	C. {x / x∉ A and x ∈ U} D. A-U
2989	Question Image	
2990	If $Z_1 = 1+ i$, $Z_2 = 2+3i$, then $\|Z_1 - Z_2\|$ =?	A. √5 B. √7 C. -1-2i D. √3
2991	Find the next two terms of 7, 9, 12, 16,...	A. 18, 20 B. 19, 22 C. 20, 25 D. 21, 27
2992	Question Image	
2993	We solve the system of non-homogeneous linear equations by	A. a and b B. b and c C. c and a D. a,b and c
2994	If #n = $(n-5)^2$+ 5, then find #3 x #4.	A. 54 B. 12 C. 4 D. 9
2995	If the angle between two vectors with magnitude 2 and 15 is 30°then their scalar product is	B. 15 C. 30
2996	Question Image	
2997	If sinθ = 12/13, and sinθ > 0, then tan θ =	A. 2/5 B. 12/13 C. 13/5 D. 12/5
2998	Question Image	
2999	The towers each 120 meters high are 800 meters apart. The measure of the angle of elevation from the base of one tower to the top of the other is	A. 12[□] B. 9[□] C. 7[□] D. -120[□]
3000	The no of term is the expansion of (a+x)n-1 is	A. n+1 B. n-1 C. n D. n-2
3001	$(a^{-1})^{-1}$=	A. a⁻¹ B. a C. -a D. None of above
3002	The series obtained by adding the terms of a geometric sequence is called	A. Infinite series B. Arithmetic series C. Geometric series D. Harmonic series
3003	In (x +iy) y is called as	A. Imaginary part B. Complex number C. Real part D. None of above
3004	Question Image	A. n < 8/5 B. n < 5/8 C. |n| < 8/5 D. |n|>8/5
3005	If no two elements of ordred pair of a function from A into B are equal, then it is called	A. surjective B. injuctive C. bijective D. on to
3006	Question Image	
3007	Question Image	
3008	The value of sin [arc cos (-1/2)] is	
3009	Question Image	A. 1 + tan²x + c B. tan x + c C. -tan x + c D. cot x + c
3010	The y intercepts and the slpe of the line expressed by line expressed by 3x - 2y + 6 = 0	A. 3/2, -3 B. -3/3 , -3/2

3010	expressed by line expressed by 3x - 2y + 6 = 0 is	C. -3,-3/2 D. -3,-3
3011	Which of the following is a quadrantal angle	A. 30° B. 45° C. 60° D. 90°
3012	Question Image	A. 1 B. 2 C. 3 D. 4
3013	If x + y + 1 = 0 touches the parabola $y^2=\lambda x$, then λ is equal to	A. 2 B. 4 C. 6 D. 8
3014	Domain of sin x is _____	
3015	The principal value of $\sin^{-1}(-1/2)$	A. π/3 B. π/4 C. π/6 D. -π/6
3016	n(n-1)(2n-1), for all natural numbers n, is divisible by	A. 12 B. 6 C. 2 D. 18
3017	The value of sin-1 24/25 is equal to	A. csc-1 25/24 B. sec-1 24/25 C. 2 tan-1 4/5 D. 2cos-1 24/25
3018	If (x_1, y_1) and (x_2,y_2) are the end points of a diameter then the centre of the circle is	
3019	14 is not a	A. Prime number B. Whole number C. Even number D. Real number
3020	A dice is rolled. The probability that the dots on the top are greater than 4 is	A. 1/6 B. 1/3 C. 1/2 D. 1
3021	Sand falls from a tube in such a way that it forms a cone whose height is always 4/3 times the radius of its base and radius of the base increases at the rate of 1/8 cm/sec. When this radius is 1 meter, the rate at which the amount of sand increases is	
3022	What is the number of elements of the power set of { }	A. 0 B. 1 C. 2 D. 3
3023	The distance of the point (a, b) from x-axis is	A. a B. b C. a + b
3024	If the number of elements in set A is n, and in set B is m, then the number of elements in AxB will	A. n^m B. mⁿ C. m x n D. m + n
3025	The vertex of the graph of the quadratic function f(x) =-x2+6x+1,is	A. (-3,10) B. (-3,-10) C. (3,10) D. (3,-10)
3026	Question Image	A. 0.9 B. 0.74 C. 0.2016 D. None of these
3027	If a polynomial P(x) is divided by x - a, then the remainder is	A. P(o) B. P(-a) C. P(a) D. None of these
3028	Question Image	A. Associative law of addition B. Commutative law of addition C. Additive identity D. Closure law of addition

3029	Adjoint of matrix A is denoted by	A. A⁻¹ B. adjA |A| C. -A D. None of these
3030	Question Image	
3031	For a set A, A∪Ac= ----------	A. A B. ⌀ C. Ac D. U
3032	The straight line passing through the focus and perpendicular to the directrix of the conic is known as its	A. Tangent B. axis C. Focal chord D. major or manor axis
3033	The point of concurrency of the medians of the ΔABC is called its	A. Orthocenter B. Centriod C. Circumcentre D. Incentre
3034	The equation of the circle with centre (h, k) and radius r is	A. (x+ h)²+ (y+ k)²= r² B. (x+ h)²+ (y - k)²= r² C. (x - h)²+ (y+ k)²= r² D. (x - h)²+ (y - k)²= r²
3035	A function F(x) is called even if	A. F(x) = F (-x) B. F(x) = F(-x) C. F(x) = -F(x) D. 2F(x) = 0
3036	If #n = (n-5)2 + 5, then find #3 x #4.	A. 54 B. 12 C. 4 D. 9
3037	Question Image	A. 1 B. 0 C. 3 D. -3
3038	What is the value of cos (cos-1 2) ?	A. √2 B. 1/2 C. undefine D. 0
3039	There are 25 tickets bearing number from 1 to 25. One ticket is drawn at random. The probability that the number on it is a multiple of 5 or 6 is	A. 7 / 25 B. 9 / 25 C. 11 / 25 D. None of these
3040	(1,0) is in the solution of the inequality	A. 3x + 2y > 8 B. 2x - 3y < 4 C. 2x + 3y > 3 D. x - 2y < -5
3041	Question Image	
3042	Question Image	
3043	If a point (p,q) is equidistant from the points (5,3) and (-2,-4), then p+ q =	A. -1 B. 1 C. 3 D. -3
3044	Only one of the root of ax2 + bx + c =0, a≠ 0 is zero if	A. c = 0 B. c = 0,b≠ 0 C. b = 0,c = 0 D. b = 0,c≠ 0
3045	{0} is a	A. Empty set B. Singleton set C. Zero set D. Null Set
3046	For any set B,B∪B' is	A. ls set B B. Set B' C. Universal set
3047	Question Image	A. One-to-one and onto B. One-to-one but not on to C. Onto but not one-to-one D. Neither one-to-one nor onto
3048	Which is not a half plane	A. ax + by < c B. ax + by > c

		C. Both A and B D. None
3049	In R, the multiplicative inverse of a is	A. 0 B. 1 C. -a D. 1/a
3050	If the 4th term in the expansion of $(px + x^{-1})^m$ is 2.5 for all $x \in R$, *then*	
3051	Geometrically the modulus of a complex number represents its distance from the	A. Point (1,0) B. Point (0,1) C. Point (1,1) D. Point (0,0)
3052	A set having only one element is called	A. An empty set B. Universal set C. A singleton set D. A power set
3053	The circle $(x - 2)^2 + (y + 3)^2 = 4$ is not concentric with the circle	A. (x - 2)²+ (y + 3)²= 9 B. (x + 2)²+ (y - 3)²= 4 C. (x + 2)²+ (y - 3)²= 8 D. (x - 2)²+ (y + 3)²= 5
3054	Question Image	D. none of these
3055	Question Image	A. 0 C. 1
3056	Question Image	
3057	Question Image	B. A C. A' D. U
3058	Question Image	D. none of these
3059	For a square matrix A, if A = At, then A is called	A. Matrix B. Transpose C. Symmetric D. Non-symmetric
3060	The total number of subsets that can be formed out of the set {a, b, c} is	A. 1 B. 4 C. 8 D. 12
3061	The solution set of the equation $\|3x + 2\| = 5$ is	
3062	20. 19. 18. 17= _____	
3063	Question Image	A. cosec x + c B. -cosec x + c C. -sec x + c D. sec x + c
3064	Question Image	A. Addition B. Multiplication C. Division D. Both addition and multiplication
3065	If $f(x) = x^2$ then f(0) is	A. 0 B. 1 C. 2 D. none of these
3066	Question Image	A. c/a B. -c/a C. b/a D. -b/a
3067	Which is not included in the domain of $\cos^{-1}x$	A. 0 B. 1 C. -1 D. 2
3068	Question Image	A. 1, 2, 3 B. 1, 5, 9 C. 2, 5, 8 D. 3, 6, 9
3069	Question Image	
	radian is the measure of the angle subtended	A. radius of the circle B. circumference

3070	oat the centre of the circle by an are, whose length is equal to the	C. are length D. tangent of the circle E. none of these
3071	Question Image	A. Symmetric B. Skew-symmetric C. Hermitian D. Skew hermitian
3072	Question Image	A. From an empty set B. 1 C. 2 D. >2
3073	The length of perpendicular from (3,1) to the line 4x + 3y +20 = 0 is:	A. 7 B. 5 C. 11 D. 12
3074	If a parabola opens down, then its vertex is at the	A. Right of the parabola B. Left of parabola C. Lowest point on the parabola D. Highest point on the parabola
3075	Question Image	A. 3x²+ 2 B. 3x²+ 2x + 3 C. x³+ x² D. none of these
3076	If a cone is cut by a plane perpendicular to the axis of the cone, then the section is a	A. Parabola B. Circle C. Hyperbola D. Ellipse
3077	The complement of set A relative to universal set U is the set	
3078	Number of conics is	A. 1 B. 3 C. 2 D. 4
3079	Question Image	A. R/[0,4] B. R/(0,4) C. (0,4) D. [0,4]
3080	Range of cos x is _____	A. [-1, 1] B. R C. Negative real numbers D. R - { x | - 1 < x < 1}
3081	∀a,b, c ε R,a +c = b + c = > a = b	A. Reflexive property B. Symmetric property C. Cancellations property w.r.t. addition D. Transitive property
3082	Question Image	A. -cosec²x B. -sec²x C. - cosec x cot x D. cosec x
3083	A daclarative statement which may be true or false but not both is called a	A. hypothesis B. proposition C. implication D. conjuction
3084	The approximate percentage increase in the volume of a cube if the length of its each edge changes from 5 to 5.02 is	A. 1.2% B. 1.5% C. 0.16% D. 100.16%
3085	If $z_1 = 1 + 2i$, $z_2 = 3 + 4i$ then	A. z₁ > z₂ B. z₁ = z₂ C. z₁ < z₂ D. None of these
3086	n^2 - 1 divisible by 8 when n is	A. an odd integer B. an even integer C. Irrational D. Prime Number
3087	Given X.Y are any two sets such that number of elements in X = 18, number of elements in set Y = 24,and number of elements in set X∪ Y =40,then number of elements in set x∩ Y =	A. 3 B. 1 C. 2 D. 4
		A. A,. B, C are coincident

3088	Question Image	B. A, B, C are collinear C. Both A and B D. None of these
3089	Matrix multiplication is	A. Commutative B. Not commutative C. Not associative D. Not distributive
3090	1.4142135... is _____	A. A natural number B. A rational number C. A prime number D. An irrational number
3091	Two circles are said to be concentric if they have	A. same radius B. same chord C. same centre D. same diameter
3092	Question Image	
3093	Let A and B be two non-empty sets, then any subset of the cartesian product A x B called a	A. Function B. Domain C. Range D. Binary relation
3094	Question Image	
3095	If A = {x/x is a positive integer and 4≤x<23}, then A=	A. {1,2,3,4,5,6,7} B. {4,5,6.....22} C. {1,2,3,.....23} D. {1,2,3,4,5}
3096	{1, 2, 3} is _____	A. an infinite set B. A finite set C. A singleton set D. Universal set
3097	The polar form of complex number x ≠ I y =	A. r cos θ+ r sin θ B. r cos θ+ is sin θ C. cos θ+ r sin θ D. i cos θ+ i sin θ
3098	There are n seats round a table numbered 1, 2, 3 .... n. The number of ways in which m person can take seats is	A. ⁿP_m B. ⁿC_mx (m - 1) ! C. ⁿ⁻¹P_m D. None of these
3099	Question Image	D. none of these
3100	The area of sector with central angle of 1 radian in a circular region whose radius is 2m is	A. 0.5m2 B. 2m2 C. 1m2 D. 4m2
3101	Question Image	
3102	All men are mortal. We are men, therefore, we are also mortal. This is a useful example of	A. deduction B. induction C. conjunction D. disjunction
3103	Question Image	
3104	Question Image	
3105	202.04 is an example of	A. Recurring decimals B. Non-recurring decimals C. Terminating decimals D. None of these
3106	f(x) = sin x is:	A. an odd function B. an even function C. an implicit function D. an exponential function
3107	Question Image	D. none of these
3108	Question Image	A. 360° B. 180° C. 90° D. None of these
3109	If n(A) = n then n(P(A)) is	A. 2n B. n² C. n/2 D. 2ⁿ

3110	For any set X, X∪X is	A. X B. X' C. Φ D. Universal Set
3111	Question Image	A. Associate law of addition B. Commutative law of addition C. Additive identity D. Closure law of addition
3112	A cone is generated by all lines through a fixed point and the circumference of	A. a circle B. an ellipse C. a hyperbola D. none of these
3113	Question Image	
3114	f (x) = | x | is a/an	A. Injective function B. Bijective function C. Surjective function D. Implicit function
3115	Decimal part of irrational number is	A. Terminating B. Repeating only C. Neither repeating nor terminating D. Repeating and terminating
3116	Matrices A = [aij] 2 x 3 and B =[bij] 3 x 2 are suitable for	A. BA B. A² C. AB D. B²
3117	Given matrix A of order mxn then A+(-A)=	A. 0 B. A C. -A D. 2A
3118	The point on $y^2 = 4ax$ nearest to the focus has its abciassae equal to	A. -a B. a C. a/2 D. 0
3119	If T = {2,4,6,8,10,12}, then	A. T = (First six natural numbers) B. T = (First six odd numbers) C. T = (First six real numbers) D. T = (First six even numbers)
3120	Question Image	A. 0 B. Independent of a C. Independent of b D. Independent of c
3121	Question Image	A. 0 B. 3 C. 9 D. -3
3122	Question Image	
3123	The set {x +iy / x, y ∈ Q} forms a group under the binary operation of	A. Addition B. Multiplication C. Division D. Both addition and multiplication
3124	Question Image	
3125	If (2, 3) is the mid point of (a, 3) and (5, b) then	A. a = 1 , b = -3 B. a = -1 , b = 3 C. a = 1 , b =3 D. a = -1 , b = -3
3126	If Z = (1,2), then Z^{-1}= ?	A. (0.2, 0.4) B. (-0.2, 0.4) C. (0.2, -0.4) D. (-0.2, -0.4)
3127	cos (α-β) = cosαcosβ+ sinαsin$\beta$is true for all	A. α>β> 0 B. α>β C. β>α D. None of these
3128	Derivative of sin x w.r.t. sin x is	A. 0 B. 1 C. sin x D. cos x
3129	A statement which is already false is called	A. Tautology B. Contrapsitive

3129	A statement which is already false is called	C. Absurdity D. Universal quantifiers
3130	Two quadratic equation in which xy term is missing and the coefficients of $x^2$and $y^2$are equal, give a linear equation by _____	A. Addition B. Subtraction C. Multiplication D. Division
3131	If a_1= 3, r = 2, then the nth term of the G.P. is	A. 2.3ⁿ⁻¹ B. 3.2ⁿ C. 3.2ⁿ⁺¹ D. 3.2ⁿ⁻¹
3132	Question Image	A. 2 B. -1 C. 8 D. not defined
3133	$\forall x \in (a,b), f(x)$ is increasing if	A. f′(x) >0 B. f′(x) <0 C. f′′(x) >0 D. f′′(x) =0
3134	Question Image	A. 4x + 1 B. 4x C. 2x³ D. none of these
3135	The range of inequality x + 2 > 4 is	A. (-1, 2) B. (-2, 2) C. (1,∞) D. None
3136	The value of k (k > 0) for which the equation x^2+ kx + 64 = 0 and x^2- 8x + k = 0 both will have real roots is	A. 8 B. -16 C. -64 D. 16
3137	Question Image	
3138	Power set of X i.e P(X) _____ under the binary operation of union U	A. Forms a group B. Does not form a group C. Has no identity element D. Infinite set although X is infinite
3139	If in the expansion of $(1+x)^n$, co-efficients of 2nd, 3rd and 4th terms are in A.P., then x=	A. 4 B. 5 C. 6 D. 7
3140	sin 2 α=	
3141	Question Image	
3142	Question Image	
3143	Question Image	
3144	Question Image	A. π / 4 B. π / 6 C. π / 3 D. 0
3145	If n is add the expansion $(a + x)^n$has middle terms	A. 2 B. 3 C. 4 D. 5
3146	Which of the following is surjective	
3147	Domain of cot$\theta$is	
3148	The maximum value of Z = 3x+ 4y subjected to the constrains x+ y≤ 40,x+ 2y≤ 60, x≥ 0 and y≥ 0 is	A. 120 B. 100 C. 140 D. 160
3149	Question Image	A. A is proper subset of B B. A is an improper subset of B C. A is equivalent to B D. B is subset of A
3150	(0,0) is in the solution of the inequality	A. x + y > 3 B. x - y > 2 C. 3x + 2y > 5

		D. 3x - 2y < 2
3151	Question Image	
3152	Question Image	A. Additive property in R B. Multiplication property in R C. Cancellation property in R D. Distribution property in R
3153	Question Image	A. sec x tan x B. cos²x C. sin²x D. sec²x
3154	cos(π/2-θ) = _____;	A. cosθ B. sinθ C. -cosθ D. -sinθ
3155	(a,b) +(-a,-b) =	A. (0,0) B. (a,b) C. (-a,-b) D. (1,1)
3156	The line 3x - 4y = 0	A. Is a tangent to the circle x²+ y²= 25 B. Is a normal to the circle x²+ y²=25 C. Does not meet the circle x²+ y²= 25 D. Does not pass thro' the origin
3157	Which of the following sets has closure property w.r.t. addition	A. { 0 } B. { 1 } C. { 0, -1} D. { 1, -1}
3158	Two cards are drawn at random from a well shuffled pack of cards. The probability that at least one of them is a face card is	A. 3 / 17 B. 5 / 17 C. 7 / 17 D. 9 / 17
3159	In a school, there are 150 students. Out of these 80 students enrolled for mathematics class, 50 enrolled for English class, and 60 enrolled for Physics class. The students enrolled for English cannot any other class, but the students of mathematics and Physics can take two courses at a time. Find the number of students who have taken both physics and mathematics	A. 40 B. 30 C. 50 D. 20
3160	A point where two of its boundary lines intersect is called	A. Corner point B. Feasible point C. Vertex D. Feasible solution
3161	Question Image	D. none of these
3162	Question Image	A. I quadrant B. II quadrant C. III quadrant D. IV quadrant
3163	The area of circle of unit radius =	A. 0 B. 1 C. 4 D. π
3164	Question Image	A. n if n is even B. 0 for any natural number n C. 1 if in odd D. None of these
3165	A kite flying at a height of 67.2 m is attached to a fully stretched string inclined at an angle of 53 to the horizontal, the length of the string	A. 62m B. 82m C. 73m D. 57m
3166	Which of the following is a scalar	A. weight B. force C. speed D. momentum
3167	The area between the x-axis the curve y =4x-x2 is :	A. 32/2 B. 15 C. 18 D. 21
		A. Series

3168	Sequence also called.....	B. Function C. progressions D. Elements
3169	Question Image	
3170	The distance between the points (2,3) and (3,2) is	A. 5 C. 2 D. 10
3171	The term involving x^4 in the expansion of $(3 - 2x)^7$ is	A. 120 B. 1512 C. 1250 D. 15120
3172	For the parabola the line through focus and perpendicular to the directrix is called	A. Tangent B. Vertex C. Axis D. None
3173	Question Image	
3174	Question Image	D. none of these
3175	If $b^2 - 4ac$ is positive then the roots of the equation are	A. Real B. Imaginary C. Positive D. Negative
3176	If the pth, qth, and rth terms of an A.P. are in G.P:., then the common ratio of the G.P. is	
3177	$(x + 3)(x + 4) = x^2 + 7x + 12$ is _____	A. Quadratic equation B. Linear equation C. Cubic equation D. Identity
3178	The unit vector along x-axis is	D. none of these
3179	Question Image	
3180	0 is a symbol of	A. singleton set B. Empty set C. Equivalent set D. Infinite set
3181	If distance between (a,2) and (0,0) is 2 then a = _____	A. 0 B. 2 C. 4
3182	$\int x/\sin^2 x\, dx$ is equal to:	A. x cot x + ln|sin x| B. -x cot x - ln|sin x| C. x cot x - ln|sin x| D. x. tan x- ln|sec x|
3183	{x : xε Z and x < 1} is	A. Singleton set B. A set with two points C. Empty set D. None of these
3184	Negation of a given number is an example of	A. Binary operation B. group C. unary operation D. function
3185	Every natural number is	A. A prime number B. An irrational number C. An integer D. An even number
3186	A triangle which is not right angle is called _____ triangle	A. acute B. Obtuse C. Right D. Oblique
3187	A number A is called the arithmetic mean between a and b if a, A, b is _____	A. Arithmetic sequence B. Geometric sequence C. Harmonic sequence D. Arithmetic sequence
3188	The set {1,-1,i,-i}	A. Form a group w.r.t addition B. Form a group w.r.t multiplication C. Does not form a group w.r.t multiplication D. Not closed under multiplication
3189	If C={p/p < 18, p is a prime number}, then C =	A. {2,3,4,.....17} B. {2,4,6,8.....16} C. {1,3,5,7,9,11,13,15,17}

		D. {3,6,9,12,15}
3190	Sin $h^{-1}x$ = _____	
3191	The principal value of $\sin^{-1}[-\sqrt{(3)}/2]$ is	A. 5π/3 B. -2π/3 C. - D. π/3
3192	Question Image	A. 1 B. 0 C. 5 D. 2
3193	The coefficient of the second term of $(a+b)^4$ is	A. 1 B. 9 C. 3 D. 5
3194	Question Image	
3195	Question Image	
3196	Question Image	A. Principle of equality of fractions B. Rule for product of fractions C. Golden rule for fractions D. Rule for quotient of fractions
3197	A committee consists of 9 experts taken from three institutions A, B, and C, of which 2 are from, A, 3 form B and 4 from C. If three experts resign, then the probability that they belong to different institutions is	A. 1 / 729 B. 1 / 24 C. 1 / 21 D. 2 / 7
3198	Two circle s1: x2+ y2 +2x- 2y- 7= 0: s2: x2+ y2- 6x+ 4y+ 9= 0	A. Touch externally B. Touch internally C. Intersects each other D. Do not intersects
3199	Question Image	A. (a + b)c = ac + bc B. a + b = b + a C. (a + b) + c = a + (b + c) D. a(b +c) = ab + ac
3200	Fundamental law is	
3201	If in a set of real no a is additive identity then	A. a+a = 2a B. a+a = 1 C. a+a = 0 D. None of these
3202	If Z_1= 1 + i, Z_2= 2+3i, then $\|Z_2 - Z_1\|$ = ?	
3203	The eccentricity of the conic $9x^2 - 16y^2 = 144$ is	A. 4/5 B. 5/4 C. 4/3 D. 3/4
3204	The range of function f(x)=-x2+2x-1 is	A. R B. (-∞,0] C. (-∞,1] D. [0,∞)
3205	Question Image	A. Principle of equality of fractions B. Rule for product of fractions C. Golden rule of fractions D. Rule for quotient of fractions
3206	If 0 = {1,3,5.....}, then n (0) =	A. Infinite B. Even numbers C. odd integers D. 99
3207	3x + 4 > 0 is	A. equation B. identity C. inequality D. none of these
3208	The distance from the point P(6,-1) to the line 6x - 4x + 9 = 0 is:	A. 5/7 B. √52/7 C. 2/48 D. 49 /√52
3209	The coefficient of xn in the expansion of (1-2x)-	A. (-1)n2n B. 2n

3209	1 is	C. (-1)(n+1)xr D. (n+1)2n
3210	Sin-1(-x)=	A. x B. -x C. -sin-1 x D. cos-1 x
3211	If D = {a} , the P(D) =	A. {a} B. <!--[if gte msEquation 12]><m:oMathPara><m:oMath><m:r>⌀</m:r></m:oMath></m:oMathPara><![endif]--><!--[if !msEquation]--><!--[if gte vml 1]><v:shapetype id="_x0000_t75" coordsize="21600,21600" o:spt="75" o:preferrelative="t" path="m@4@5l@4@11@9@11@9@5xe" filled="f" stroked="f"> <v:stroke joinstyle="miter"/> <v:formulas> <v:f eqn="if lineDrawn pixelLineWidth 0"/> <v:f eqn="sum @0 1 0"/> <v:f eqn="sum 0 0 @1"/> <v:f eqn="prod @2 1 2"/> <v:f eqn="prod @3 21600 pixelWidth"/> <v:f eqn="prod @3 21600 pixelHeight"/> <v:f eqn="sum @0 0 1"/> <v:f eqn="prod @6 1 2"/> <v:f eqn="prod @7 21600 pixelWidth"/> <v:f eqn="sum @8 21600 0"/> <v:f eqn="prod @7 21600 pixelHeight"/> <v:f eqn="sum @10 21600 0"/> </v:formulas> <v:path o:extrusionok="f" gradientshapeok="t" o:connecttype="rect"/> <o:lock v:ext="edit" aspectratio="t"/> </v:shapetype><v:shape id="_x0000_i1025" type="#_x0000_t75" style='width:6.75pt; height:14.25pt'> <v:imagedata src="file:///C:/Users/Softsol/AppData/Local/Temp/msohtmlclip1/01/clip_image001.png" o:title="" chromakey="white"/> </v:shape><![endif]--><!--[if !vml]--><img width="9" height="19" src="file:///C:/Users/Softsol/AppData/Local/Temp/msohtmlclip1/01/clip_image002.png" v:shapes="_x0000_i1025" style="font-family: Calibri, sans-serif; font-size: 11pt;">⌀<!--[endif]--><!--[endif]--><o:p></o:p> C. {⌀,{a}} D. {⌀,a}
3212	Number of terms in the expansion of $(a+x)^n$is	A. n - 1 B. n + 1 C. n + 2 D. n + 3
3213	A function from X to X is denoted as	B. f : X to Y D. f : Y to Y
3214	Question Image	
3215	The expression x2 - x + 1 has	A. One proper linear factor B. No proper linear factor C. Two proper linear factors D. None of these
3216	Domain of cosh x is	A. R B. R -{0} C. [1,∞) D. [0,∞)
3217	The solution set of the equation 4 $\cos^2 x$ - 3 + 0 is	D. none of these
3218	(A ∩ B)c =	A. A∩ B B. (A ∪ B)c C. Ac∪Bc D. Φ
3219	If x+y+z+.....+2n = 2n+1-1 ∀n∈W,then cube root of xyz is equal to	A. 1 B. 4 C. 2 D. 8
3220	Question Image	
3221	Two straight line are given as M:y = -1/3 x+2 which of the following statement is correct	A. M & N are parallel B. M & N are not intersect C. M & N is perpendicular D. M & N are intersect at multiple
3222	Question Image	A. Commutative law of addition B. Associative law of addition C. Additive identity D. Additive inverse
3223	If A is a matrix of order mxl , then matrix A is called	A. singular matrix B. Column matrix C. Row matrix D. Identity matrix
3224	(a,b) (c,d) if and only if	A. a = b and c =d B. a = d and b = c C. a = c and b = d D. a - b = c - d

3225	Question Image	A. 1/x B. -x C. 2x D. 0.5 x
3226	Question Image	D. none of these
3227	Domain of cot x is _____	
3228	Question Image	A. l²+ m²+ n²= 0 B. l²- m²+ n²= 1 C. l²+ m²+ n²= 1 D. l²+ m²- n²= 0
3229	If both p and q are false, then the disjunction of p and q is	A. false B. true C. equal D. equivalent
3230	$\underline{O}(0,0)\underline{i}$ is called:	A. Position vector B. Free vector C. Unite vector D. Null vector
3231	The equation of vertical asymptotes of y = cos ecx is	A. x = 0 B. y = 0 C. x =∞ D. y =∞
3232	Question Image	
3233	In set builder notation the set {0, 1, 2, ..., 100} can be written as	
3234	Minor of an element a_{ij} is denoted by	A. M_{ij} B. A_{ij} C. |A| D. None of these
3235	The angle of elevation of the tops of two towers at the middle point of the line joining the foots of the tower are 60^o and 30^o respectively. The the ratio of the heghts of the tower is	A. 2 : 1 B. 3 : 1 C. 1 : 2 D. 1 : 3
3236	x-axis divides the line segment joining points (2,-3) and (5,6) in the ratio:	A. 2 : 1 B. -2 : 1 C. 1 : 2 D. -1 : 2
3237	The period of cot 8x is	A. π/10 B. 9π/7 C. π/9 D. π/8
3238	Question Image	A. An upper triangular matrix B. A lower triangular matrix C. A diagonal matrix D. A null matrix
3239	The domain of an infinite sequence is a	A. Set of natural numbers B. R C. Subset of N D. None of the above
3240	Which of the following is not a unit vector	A. [1, 1, 1] B. [0, 1, 0] C. [0, 0, 1] D. [1, 0, 0]
3241	$¡^2$ =	A. 1 B. 2 C. -1 D. 0
3242	The graph of linear equation 2x + 3y = 10	A. Parabola B. Circle C. Hyperbola D. Straight line
3243	Question Image	A. square root function B. identity function C. linear function D. quadratic function
3244	Question Image	D. none of these
		A. 0

3245	No term of a harmonic sequence can be	B. 1 C. 2 D. 3
3246	Vector i =	A. [1,0] B. [0,1,0] C. [0,0,1] D. None of these
3247	Question Image	A. A = B B. B = C C. A = C D. None of these
3248	Multiplicative inverse of 0 is	A. 0 B. 1 C. ±1 D. Does not exist
3249	Question Image	
3250	If the lines 2x-3y-1=0,3x-y-5=0 and 3x+py+8=0 meet at a unique point then	A. p = -14 B. p = -1 C. p =0 D. p=12
3251	The straight lines represented by the equation ax2+ 2hxy +by2 =0 intersects at	A. (1,1) B. (0,1) C. (1,0) D. (0,0)
3252	Zero is	A. An irrational number B. A rational number C. A negative integer D. A positive number
3253	The angle AOP which the ray from an observer's eye at O to an object at P at a lower level makes with horizontal ray OA through O is called the	A. Angle of depression B. Angle of elevation C. Acute angle D. Obtuse angle
3254	The slope of the tangent of the circle $x^3 + y^3$ =25 at (4,3) is:	A. -4/5 B. 4/3 C. -25/4 D. 25/3
3255	Question Image	B. xⁿ⁻¹
3256	If one root of 5x2 + 13x + k = 0 be the reciprocal of the other root the value of k is	A. 0 B. 2 C. 1 D. 5
3257	Question Image	
3258	The sets {1, 2, 4} and {4, 6, 8, 10} are	A. Equal sets B. Equivalent sets C. Disjoint sets D. Over lapping sets
3259	Write the first four terms of the arithmetic sequence 5, 2, -1, ... is	A. 3 B. -4 C. 7 D. 1
3260	If a2 = b2 then	A. a = b B. a+b= 1 C. |a+b| =0 D. None
3261	What is the period of tan 4/3 x =?	A. π/4 B. 4π/3 C. 7π/4 D. 3π/4
3262	0.25 is _____	A. An irrational number B. A natural number C. A prime number D. A rational number
3263	If distance of (a,b) from y-axis is 2 then	A. a = 2 B. b = 2 C. a = b D. a = 4
3264	sin5θ+sin3θ = _____;	A. 2sin 4θ cosθ B. 2cos 4θ sinθ C. 2cos 4θ cosθ

		D. -2sin 4θ sinθ
3265	2π is the period of	A. sin□ B. tan□ C. cot□ D. all circular function
3266	∀a,b,c∈R and c>0,then	A. a>b ⇒ ac < bc B. a>b ⇒ ac > bc C. a<b ⇒ ac > bc D. None of these
3267	Question Image	
3268	The curve f(x,y) = 0 has a central symmetry if	A. f(-x,-y)=f(x,y) B. f(x,-y)=f(x,y) C. f(-x,y)=f(x,y) D. f(-x,-y)≠f(x,y)
3269	For each natural number n, n (n+1) is	A. an even B. an odd C. multiple of 3 D. Irrational
3270	3x + 4 < 0 is	A. inequality B. equation C. identity D. not inequality
3271	The condition for polynomial equation ax^2+ bx + c = 0 to be quadratic is	
3272	If A(x_1, y_1) , B(x_2, y_2) and C(x_3, y_3) are the vertices of a triangle then its centroid is	
3273	Question Image	
3274	Q ∪ Q' =	A. Q B. Q' C. N D. R
3275	Which of the following diagrams represent into function?	
3276	The are of the circle centred at (1 , 2) and passing through (4 , 6) is:	A. 10π B. 25π C. 5π D. 25/2π
3277	Inequalities have _____ symbol	A. 2 B. 3 C. 4 D. 1
3278	Question Image	
3279	Question Image	A. Rational fraction B. Proper fraction C. Improper rational fraction D. None of these
3280	The product of the four fourth roots of unity is	A. 0 B. 1 C. -1 D. None of these
3281	Basic principles of deductive logic were laid down by	A. Euclid B. Leibniz C. Newton D. Aristotle
3282	sin ($\sin^{-1}$(1/2))=	A. 0 B. 2 C. ∞ D. 1/2
3283	Question Image	D. none of these
3284	Question Image	
3285	N is closed with respect to ordinary	A. addition B. multiplication C. addition and multiplication D. division

3286	The process of finding the unknown elements in triangle is called the	A. solution of the triangle B. Mean differnece C. Engineering distance D. angle of depressin
3287	The sum of the focal distance from any point on the ellipse 9x2 +16y2 =144 is	A. 32 B. 16 C. 18 D. 8
3288	In polar form of complex number r =	
3289	3/π=.....	A. 54.71^o B. 21^o C. 51^o D. 29^o
3290	The third term of a G.P. is 4, The product of first five terms is	A. 43 B. 45 C. 46 D. None of these
3291	A∪(A∪B)= ----------	A. B B. A C. A∪B D. None of these
3292	Question Image	
3293	Period of Sine and Cosine function is	A. π B. 2π C. -π D. -2π
3294	Question Image	A. Square matrix B. Row matrix C. Symmetric matrix D. Null matrix
3295	Question Image	
3296	Question Image	A. 6 C. 20 D. 0
3297	Question Image	
3298	Question Image	
3299	The number of standard parabolic functions are is	A. 4 B. 2 C. 3 D. 1
3300	An integer is chosen at random from the number ranging from 1 to 50. the probability that the integer chosen is a multiple of 2 or 3 or 10 is	A. 3 / 10 B. 5 / 10 C. 7 / 10 D. 9 / 10
3301	The distance of the point (-2,3) from x-axis is	A. -2 B. 2 C. 3 D. 1
3302	For n€ N,$2^{n>2}$ > n is to only when	A. n<2 B. n≤ 4 C. n≥ 4
3303	∀ z ∈ C, multipliucative is	A. (1,1) B. (1,0) C. (0,1) D. None of these
3304	Question Image	A. 0 B. 2 C. 4/3 D. 5/3
3305	The set {Z\{0}} is group w.r.t	A. Addition B. Multiplication

3305	The set {2\{0}} is group w.r.t	B. Multiplication C. Division D. Subtraction
3306	The identity element with respect to subtraction is	A. 0 B. -1 C. 0 and 1 D. None of thes
3307	Question Image	
3308	Question Image	
3309	Question Image	
3310	The square root of 2i - 20i is	A. ±(5 - 2i) B. ±(5+ 2i) C. (5 - 2i) D. None of these
3311	Question Image	
3312	Question Image	
3313	The principal value of sin-1√(3/2) is	A. -π/3 B. π/3 C. 2π/3 D. π/2
3314	Every real number is	A. A complex number B. A rational number C. A natural number D. A prime number
3315	The number of proper subset of A ={a.b.c.d} is	A. 3 B. 6 C. 8 D. 15
3316	If a plane passes through the vertex of the cone, then the intersection is	A. an ellipse B. a parabola C. a hyperbola D. a point circle
3317	If c is a constant, then d/dx (c) =	A. 0 B. c C. cx D. 1
3318	For f(x) = x2, what is the value of f(a) +f (-a) in terms of a?	A. 3a2 B. 2a2 C. 2a D. -7a
3319	The sum of even coefficient in the binomial expansion is	A. 2ⁿ⁺¹ B. 2ⁿ C. 2ⁿ⁻¹ D. 2n
3320	The minimum value of the function f(x) = x^2 - x - 2 is.	A. -9/2 B. -1 C. -9/4 D. 0
3321	Question Image	A. A rational number B. A natural number C. An irrational number D. An integer
3322	If $f(x) = x^{-100}$ the value of f^1 (1) is:	A. 100 B. -100 C. 0 D. -101
3323	Question Image	
3324	The integral of $3x^5$dx is:	A. 15 x⁴ B. x⁶/2 C. 1/6x⁵ D. x⁵/ln3
3325	A function from X to Y is written as	B. f : X to Y D. f : Y to Y
3326	Question Image	A. 9 B. -9 C. 0 D. 1

3327	For three consecutive terms in A.P middle term is called	A. A.M B. nth term C. Central term D. None of these
3328	If sin ($\pi\cos\theta$) = cos ($\pi\sin\theta$), then which of the following is correct?	
3329	Question Image	A. cos x B. sec x tan x C. sec²x D. -cosec²x
3330	The set of ordered pairs (x,y) such that ax+ by < c, and (x,y) such that ax + by>0, are called	A. Half planes B. Boundary C. Linear Inequalities D. Feasible regions
3331	If y = eax sin bx and y2 - 2ay1 + (a2+b2) y=0 the for what values of a and b we have y2+10y1+34y =0	A. a = -10,b=34 B. a=-5,b=3 C. a=5,b=3 D. a=10,b=34
3332	The interval in which f(x)=x3-6x2+9x is increasing	A. 1<x<3 B. x<1 and x>3 C. X ≥1 and x ≤ 3 D. -∞ < x < ∞
3333	Question Image	
3334	The negation of given number is a	A. Binary operation B. Unary operation C. Relation D. None of these
3335	Question Image	A. -35 B. -28 C. 41 D. 72
3336	Question Image	A. a²b²c² B. 4a²b²c² C. 4abc D. None
3337	If A and B are two matrices of order 2 x 3 and 3 x1, respectively, then A+B =	A. B+A B. AB C. Not Possible D. 0
3338	A sequence is a function whose domain is	A. N B. Subset of N C. R D. None of these
3339	i^{101} =	A. i B. i² C. -i D. -1
3340	Area of the circle with ends of a diameter at (-3,2) and (5,-6)	A. 128π sq. units B. 64π sq. units C. 32π sq.units D. None of these
3341	If (0,4) and (0,2) are vertex and focus of the parabola respectively, the the equation of the parabola is:	A. x² = 4y -32 B. x² =8y -32 C. y³ = 16 x D. x2 + 8y =32
3342	In general for matrix multiplication, which property is not possible?	A. Associative B. Commutative C. Left distributive property D. right distributive property
3343	The maximum value of sin x + cos x is	
3344	Associative law of multiplication	A. ab - ba B. a(bc) = (ab) c C. a(b + c) = ab +ac D. (a +b)c = ac + bc
3345	In ladder leaning against a vertical well makes an angle of 24□with the wall, Its foot is 5m from the wall, its length is	A. 5.47m B. 2m C. 7m D. 6.29m
		A. 4x+3

3346	If f (x) = 2x+1 then fof (x) = _____;	B. 2x +3 C. 4x +1 D. None of these
3347	Question Image	
3348	Question Image	
3349	The magnitude of vector a=i-3j+5k is:	A. 3 B. √35 C. √17 D. √35
3350	IF the cone is cut by a plane perpendicular to the axis of the cone, then the section is a	A. circle B. ellipse C. hyperbola D. parabola
3351	A matrix with a single row is called a	A. Column matrix B. Row matrix C. Null matrix D. Identity matrix
3352	The graph of a quadratic function is	A. Circle B. Ellipse C. Parabola D. Hexagon
3353	Question Image	
3354	A sequence having no last term is called	A. arithmetic sequence B. Geometric sequence C. Finite sequence D. Infinite sequence
3355	A statement which is already false is called	A. Tautology B. Contrapsitive C. Absurdity D. Universal quantifiers
3356	Question Image	
3357	√-1 b=	A. b B. 2 C. 2b D. None of these
3358	If n is any positive integer then $4^n > 3^n + 4$ is true for all	
3359	Question Image	